OFFICIAL PUBLICATION

of the

UNIVERSITY OF MARYLAND

Vol. 25 APRIL, 1928 No. 3

CATALOGUE

1928-1929

Containing general information concerning the University.
Announcements for the Scholastic Year 1928-29
and Records of 1927-28.

Issued monthly by the University of Maryland at College Park, Md.,
as second-class matter, under Act of Congress of July 16, 1894.

Calendar for 1928, 1929, 1930

1928

JULY

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Facts, conditions, and personnel herein set forth are as existing at the time of publication, April, 1928.

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UNIVERSITY CALENDAR

1928-1929

COLLEGE PARK

First Semester

1928		
Sept. 24–25	Monday-Tuesday	Registration for Freshmen.
Sept. 26	Wednesday	Registration for Upper Classmen.
Sept. 27	Thursday	Instruction for first semester begins.
Oct. 3	Wednesday	Last day to change registration or to file schedule card without fine.
Nov. 12	Monday, 11.00 a.m.	Observance of Armistice Day.
Nov. 28-Dec. 3	Wednesday, 4.20 p.m.-Monday, 8.20 a. m.	Thanksgiving Recess.
Dec. 20	Thursday, 12.10 p.m.	Christmas Recess begins.
1929		
Jan. 2	Wednesday, 8.20 a.m.	Christmas Recess ends.
Jan. 28–Feb. 2	Monday-Saturday	First semester examinations.

Second Semester

Jan. 23-26	Wednesday-Saturday	Registration for second semester.
Feb. 4	Monday	Last day to register for second semester without payment of late registration fee.
Feb. 5	Tuesday, 8.20 a.m.	Instruction for second semester begins.
Feb. 11	Monday	Last day to change registration or to file schedule card without fine.
Feb. 22	Friday	Washington's Birthday. Holiday
Mar. 26	Tuesday	Observance of Maryland Day.
Mar. 28–Apr. 3	Thursday, 12.10 p.m.-Wednesday, 8.20 a.m.	Easter Recess.
May 8-9	Wednesday-Thursday	Festival of Music.
May 22-25	Wednesday-Saturday	Registration for first semester, 1929-30.
May 29–June 5	Wednesday-Wednesday	Second semester examinations for seniors.
May 30	Thursday	Memorial Day. Holiday.
June 3-8	Monday-Saturday	Second semester examinations.
June 9	Sunday, 11 a. m.	Baccalaureate sermon.
June 10	Monday	Class Day.
June 11	Tuesday, 11 a.m.	Commencement.

Summer Term

June 17-22	Monday-Saturday	Rural Women's Short Course.
June 26	Wednesday	Summer School begins.
Aug. 6	Tuesday	Summer School ends.
Aug 8-13	Thursday-Tuesday	Boys' and Girls' Club Week.

BALTIMORE (PROFESSIONAL SCHOOLS)

First Semester

1928.

Monday, September 24—Registration begins.
Monday, October 1—Instruction begins with the first scheduled period.
Monday, October 8—Last day to register without paying fine of $5.00.
Monday, November 12—Holiday (Armistice Day).
Wednesday, November 28—Thanksgiving recess begins after the last scheduled period.
Monday, December 3—Instruction resumed with the first scheduled period.
Saturday, December 22—Christmas recess begins after the last scheduled period.

1929.

Thursday, January 3—Instruction resumed with the first scheduled period.
Saturday, January 26—First semester ends after the last scheduled period.

Second Semester

Monday, January 14—Registration begins for second semester.
Monday, January 28—Instruction begins with the first scheduled period.
Saturday, February 2—Last day to register without paying fine of $5.00.
Friday, February 22—Holiday (Washington's Birthday).
Thursday, March 28—Easter recess begins after the last scheduled period.
Tuesday, April 2—Instruction resumed with the first scheduled period.
Saturday, June 8—Commencement Day.

Officers of Administration and Instruction

BOARD OF REGENTS

SAMUEL M. SHOEMAKER, Chairman 1924-1933
Eccleston, Baltimore County

ROBERT CRAIN 1924-1933
Mt. Victoria, Charles County

JOHN M. DENNIS, Treasurer 1923-1932
Union Trust Co., Baltimore

DR. FRANK J. GOODNOW 1922-1931
Oak Place and Charles Street Avenue

JOHN E. RAINE 1921-1930
413 East Baltimore Street, Baltimore

CHARLES C. GELDER 1920-1929
Princess Anne, Somerset County

DR. W. W. SKINNER, Secretary 1927-1936
Kensington, Montgomery County

E. BROOKE LEE (Appointed 1927) 1926-1935
Silver Spring, Montgomery County

HENRY HOLZAPFEL, JR. 1925-1934
Hagerstown, Washington County

COMMITTEES

EXECUTIVE

SAMUEL M. SHOEMAKER, Chairman

DR. FRANK J. GOODNOW — E. BROOKE LEE
ROBERT CRAIN — JOHN M. DENNIS

UNIVERSITY AND EDUCATIONAL WORK

DR. FRANK J. GOODNOW, Chairman

ROBERT CRAIN — DR. W. W. SKINNER

EXPERIMENT STATION AND INVESTIGATIONAL WORK

HENRY HOLZAPFEL, JR., Chairman

DR. W. W. SKINNER — E. BROOKE LEE

EXTENSION AND DEMONSTRATION WORK

ROBERT CRAIN, Chairman

E. BROOKE LEE — JOHN E. RAINE

INSPECTION AND CONTROL WORK

JOHN M. DENNIS, Chairman

HENRY HOLZAPFEL, JR. — CHARLES C. GELDER

ADMINISTRATIVE COUNCIL

RAYMOND A. PEARSON, M.S., D. Agr., LL.D., President.

H. C. BYRD, B.S., Assistant to the President.

H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station; Dean of the College of Agriculture.

T. B. SYMONS, M.S., D.Agr., Director of the Extension Service.

A. N. JOHNSON, S.B., D. Eng., Dean of the College of Engineering.

T. H. TALIAFERRO, C.E., Ph.D., Acting Dean of the College of Arts and Sciences.

J. M. H. ROWLAND, M.D., Dean of the School of Medicine.

HENRY D. HARLAN, LL.D., Dean of the School of Law.

ROBERT H. FREEMAN, A.M., LL.B., Assistant Dean of the School of Law.

E. FRANK KELLY, Phar.D., Advisory Dean of the School of Pharmacy.

ANDREW G. DUMEZ, Ph.D., Dean of the School of Pharmacy.

T. O. HEATWOLE, M.D., D.D.S., Secretary of the Baltimore Schools.

J. BEN ROBINSON, D.D.S., Dean of the School of Dentistry.

W. S. SMALL, Ph.D., Dean of the College of Education.

M. MARIE MOUNT, M.A., Dean of the College of Home Economics.

C. O. APPLEMAN, Ph.D., Dean of the Graduate School.

ADELE H. STAMP, M.A., Dean of Women.

R. S. LYTLE, Major Inf. D.O.L., P.M.S. & T., Head of the Department of Military Science and Tactics.

MAUDE F. MCKENNEY, Financial Secretary.

G. S. SMARDON, Comptroller.

W. M. HILLEGEIST, Registrar.

ALMA H. PREINKERT, M.A., Assistant Registrar.

H. L. CRISP, M.M.E., Superintendent of Buildings.

T. A. HUTTON, A.B., Purchasing Agent and Manager of Students' Supply Store.

GRACE BARNES, B.S., B.L.S., Librarian (College Park).

RUTH LEE BRISCOE, Librarian (Baltimore).

THE UNIVERSITY SENATE

RAYMOND A. PEARSON, M.S., D.Agr., LL.D., President of the University.
H. C. BYRD, B.S., Assistant to the President.
H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station; Dean of the College of Agriculture.
T. B. SYMONS, M.S., D.Agr., Director of the Extension Service.
A. N. JOHNSON, S.B., D.Eng., Dean of the College of Engineering.
T. H. TALIAFERRO, C.E., Ph.D., Acting Dean of the College of Arts and Sciences.
J. M. H. ROWLAND, M.D., Dean of the School of Medicine.
HENRY D. HARLAN, LL.D., Dean of the School of Law.
ROBERT H. FREEMAN, A.M., LL.B., Assistant Dean of the School of Law.
E. FRANK KELLY, Phar. D., Advisory Dean of the School of Pharmacy.
ANDREW G. DUMEZ, Ph.D., Dean of the School of Pharmacy.
T. O. HEATWOLE, M.D., D.D.S., Secretary of the Baltimore Schools.
J. BEN ROBINSON, D.D.S., Dean of the School of Dentistry.
W. S. SMALL, Ph.D., Dean of the College of Education.
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R. S. LYTLE, Major Inf., D.O.L., P.M.S. & T., Head of the Department of Military Science and Tactics.

THE GRADUATE SCHOOL COUNCIL

RAYMOND A. PEARSON, M.S., D.Agr., LL.D., President of the University.
C. O. APPLEMAN, Ph.D., Dean of the Graduate School, Chairman.
E. S. JOHNSTON, Ph.D., Secretary.
H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station.
N. E. GORDON, Ph.D., Professor of Physical Chemistry.
A. N. JOHNSON, D.Eng., Professor of Highway Engineering.
T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics.
E. N. CORY, Ph.D., Professor of Entomology.
H. C. HOUSE, Ph.D., Professor of English and English Literature.
H. F. COTTERMAN, M.A., Professor of Agricultural Education.
DEVOE MEADE, Ph.D., Professor of Animal and Dairy Husbandry.
E. C. AUCHTER, Ph.D., Professor of Horticulture.
M. MARIE MOUNT, M.A., Professor of Home and Institutional Management.

OFFICERS OF INSTRUCTION

For the Year 1927-1928

At College Park

PROFESSORS

C. O. APPLEMAN, Ph.D., Professor of Plant Physiology and Bio-Chemistry, Dean of the Graduate School.
E. C. AUCHTER, Ph.D., Professor of Horticulture.
A. A. BACKHAUS, M.A., Professor Collaborating in Cooperative Course in Chemistry.
E. H. BARCLAY, Ph.D., Professor Collaborating in Cooperative Course in Chemistry.
GRACE BARNES, B.S., B.L.S., Librarian, Instructor in Library Science.
F. W. BESLEY, Ph.D., Professor of Farm Forestry, State Forester.
L. B. BROUGHTON, Ph.D., Professor of Agricultural and Food Chemistry, Associate Head of the Department of Chemistry, Chairman of the Pre-Medical Committee.
O. C. BRUCE, M.S., Professor of Soils.
H. C. BYRD, B.S., Assistant to the President, Director of Athletics.
B. E. CARMICHAEL, M.S., Professor of Animal Husbandry.
R. W. CARPENTER, A.B., LL.B., Professor of Agricultural Engineering and Lecturer in Law.
E. N. CORY, Ph.D., Professor of Entomology, State Entomologist.
H. F. COTTERMAN, B.S., M.A., Professor of Agricultural Education and Rural Sociology, Associate Dean of the College of Education.
MYRON CREESE, B.S., E.E., Professor of Electrical Engineering.
HAYES BAKER-CROTHERS, Ph.D., Professor of History and Political Science.
S. H. DEVAULT, A.M., Professor of Agricultural Economics.
NATHAN L. DRAKE, Ph.D., Professor of Industrial Chemistry.
C. G. EICHLIN, A.B., M.S., Professor of Physics.
L. W. ERDMAN, Professor of Soils.
F. W. GEISE, M.S., Professor of Olericulture.
N. E. GORDON, Ph.D., Professor of Physical Chemistry, State Chemist.
HARRY GWINNER, M.E., Professor of Mechanical Engineering, Vice-Dean of the College of Engineering.
H. C. HOUSE, Ph.D., Professor of English and English Literature, Director of Choral Music.
A. N. JOHNSON, B.S., D.Eng., Professor of Highway Engineering, Director of Engineering Research, Dean of the College of Engineering.
M. KHARASCH, Ph.D., Professor of Organic Chemistry.
GEORGE E. LADD, Ph.D., Lecturer in Engineering Geology.
B. T. LELAND, B.S., M.A., Professor of Industrial Education.
FRIEDA M. MCFARLAND, M.A., Professor of Textiles and Clothing.
EDNA B. MCNAUGHTON, M.A., Professor of Home Economics Education.

DEVOE MEADE, Ph.D., Professor of Animal and Dairy Husbandry.
J. E. METZGER, B.S., M.A., Professor of Agronomy.
J. E. MILLS, Ph.D., Professor Collaborating in Cooperative Course in Chemistry.
M. MARIE MOUNT, M.A., Professor of Home and Institutional Management, Dean of the College of Home Economics.
J. N. G. NESBIT, B.S., M.E., E.E., Professor of Mechanical Engineering.
J. B. S. NORTON, M.S., D.Sc., Professor of Systematic Botany and Mycology.
H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station, Dean of the College of Agriculture.
E. M. PICKENS, D.V.M., A.M., Professor of Bacteriology, Animal Pathologist of the Biological and Live Stock Sanitary Laboratories.
C. J. PIERSON, A.B., A.M., Professor of Zoology.
R. C. REED, Ph.B., D.V.M., Professor of Animal Pathology.
C. S. RICHARDSON, A.M., Professor of Public Speaking and Extension Education.
W. S. SMALL, Ph.D., Professor of Education, Dean of the College of Education, Director of the Summer School.
THOS. H. SPENCE, A.M., Professor of Classical Languages and Literature, Dean Emeritus of the College of Arts and Sciences.
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S. S. STEINBERG, B.E., C.E., Professor of Civil Engineering.
T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics, Acting Dean of the College of Arts and Sciences.
W. T. L. TALIAFERRO, A.B., D.Sc., Professor of Farm Management.
C. E. TEMPLE, M.A., Professor of Plant Pathology, State Plant Pathologist.
A. S. THURSTON, M.S., Professor of Floriculture and Landscape Gardening.
R. V. TRUITT, M.S., Professor of Aquiculture.
R. H. WAITE, B.S., Professor of Poultry Husbandry.
A. E. ZUCKER, Ph.D., Professor of Modern Languages and Comparative Literature.

ASSOCIATE PROFESSORS

G. F. CADISCH, M.B.A., Ph.D., Associate Professor of Banking and Investments, Acting Head of Department of Economics and Sociology, Assistant to the Dean, College of Arts and Sciences.
CHARLES B. HALE, Ph.D., Associate Professor of English.
SUSAN EMOLYN HARMAN, Ph.D., Associate Professor of English.
MALCOLM HARING, Ph.D., Associate Professor of Chemistry.
E. S. JOHNSTON, Ph.D., Associate Professor of Plant Physiology.
W. B. KEMP, B.S., Associate Professor of Genetics and Agronomy.
C. F. KRAMER, A.M., Associate Professor of Modern Languages.
G. J. SCHULZ, A.B., Lecturer in Political Science.

W. MACKENZIE STEVENS, M.B.A., Ph.D., Associate Professor of Accounting and Business Administration.
CLARIBEL P. WELSH, B.S., M.A., Associate Professor of Foods.
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TOBIAS DANTZIG, Ph.D., Assistant Professor of Mathematics.
HARRY A. DEFERRARI, Ph.D., Assistant Professor of Modern Languages.
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CHARLES E. WHITE, Ph.D., Assistant Professor of Chemistry.

INSTRUCTORS

E. S. BELLMAN, A.B., Instructor in Sociology.
J. B. BLANDFORD, Instructor in Horticulture, Horticultural Superintendent.
HENRY BRECHBILL, M.A., Instructor in Education.
SARA B. BRUMBAUGH, A.M., Instructor in Education.
SUMNER BURHOE, M.S., Instructor in Zoology.

CASPER L. COTTRELL, A.B., Instructor in Physics.
EUGENE B. DANIELS, M.A., M.F.S., Instructor in Economics and Sociology.
E. E. ERICSON, M.A., Instructor in English (Baltimore).
B. L. GOODYEAR, Instructor in Music.
L. C. HUTSON, Instructor in Mining Extension.
ABRAHAM PRESS, B.S., E.E., M.Sc., Instructor in Physics (Baltimore).
M. A. PYLE, B.S., Instructor in Civil Engineering.
J. THOMAS PYLES, M. A., Instructor in English.
GRACE RAEZER, R.N., Instructor in Home Nursing and Hygiene.
ADELIA E. ROSASCO, A.B., Instructor in Education.
H. B. SHIPLEY, Instructor in Physical Education.
KATHLEEN M. SMITH, A.B., Instructor in Education.
CONSTANCE STANLEY, M.A., Instructor in Modern Languages.
GUY P. THOMPSON, B.S., Instructor in Zoology (Baltimore).
R. M. WATKINS, M.A., Instructor in Public Speaking.

ASSOCIATES

H. S. MCCONNELL, B.S., Associate in Entomology.
J. M. SNYDER, B.S., Associate in Soils.

ASSISTANTS

JESSIE BLAISDELL, Assistant in Music.
L. E. BOPST, B.S., Assistant State Chemist.
NELLIE BUCKEY, B.S., Assistant in Home Economics Education.
CARL M. CONRAD, Ph.D., Assistant in Experiment Station.
GILES B. COOKE, M.S., Assistant in Chemistry.
EUGENE F. COTTER, Assistant in Animal and Dairy Husbandry.
E. C. DONALDSON, M.S., Assistant Chemist and Inspector.
GEORGE W. FOGG, B.A., Assistant in the Library.
W. M. J. FOOTEN, Assistant Chemist and Inspector.
W. J. HART, M.S., Assistant in Agricultural Economics.
EDNA HENDERSON, B.S., Assistant in Home Economics.
DONALD HENNICK, Assistant Mechanical Engineer.
AUDREY KILLIAM, B.S., Assistant in Home Economics.
PAUL PELTIER, B.S., Assistant in Entomology.
PAULINE RICE, A.B., Assistant to the Dean of Women.
J. E. RICE, Assistant in Chemistry.
L. H. VAN WORMER, M.S., Assistant Chemist and State Inspector.
H. R. WALLS, Assistant Chemist and Inspector.
J. J. WETHERALD, Assistant in Dairy Manuacturing.
H. B. WINANT, M.S., Assistant in Soils.

FELLOWS AND GRADUATE ASSISTANTS

(1) Research Graduate Assistants

College of Agriculture and Experiment Station

E. A. BEAVENS.....Bacteriology.
J. M. BLANDFORD.....Home Economics.
L. P. DITMAN.....Entomology.
H. B. FARLEY.....Horticulture.
W. L. KERR.....Horticulture.
A. J. MOYER.....Plant Pathology.
A. E. NOCK.....Agricultural Chemistry.
P. X. PELTIER.....Entomology.
R. G. ROTHGEB.....Agronomy.
E. H. SCHMIDT.....Agronomy.
L. S. STUART.....Bacteriology.
W. M. STUART.....Agronomy.
W. C. SUPPLEE.....Agricultural Chemistry.

College of Arts and Sciences

H. G. CLAPP.....Chemistry.

(2) Teaching Graduate Assistants

A. C. PARSONS.....Modern Language.
R. C. YODER.....Horticulture.
AGNES YOUNG.....English.
P. V. MOOK.....Botany.
L. D. ZERN.....Dairy Husbandry.
M. H. DASKAIS.....Chemistry.
R. W. RIEMENSCHNEIDER.....Chemistry.
H. R. FIFE.....Chemistry.

(3) Industrial Fellows

F. O. COCKERILLE.....Chemistry.
N. A. EATON.....Entomology.
M. O. FOREMAN.....Chemistry.
M. J. HORN.....Chemistry.
G. V. C. HOUGHLAND.....Soils.
R. LEGAULT.....Chemistry.
N. C. THORNTON.....Chemistry.

(4) Fellows

J. Z. MILLER.....Dairy Husbandry.
R .C. SMITH.....Economics and Sociology.
A. F. MASON.....Horticulture.
MILDRED E. BROWN.....Chemistry.
B. B. WESTFALL.....Chemistry.
W. H. MOORE.....Soils.
H. M. CONNER.....Bacteriology.

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At College Park

ALUMNI

Messrs. Broughton, Hoshall, Faber, Hillegeist, Cory, Eppley, and Truitt.

BUILDINGS

Messrs. Crisp, Johnson, Meade, Pierson, Bruce, and Eichlin.

CATALOGUE, STUDENT ENROLLMENT AND ENTRANCE

Messrs. Small, Johnson, T. H. Taliaferro, Patterson, Appleman, Kemp, House and Misses Mount, Stamp, and Preinkert.

CLASS ASSIGNMENT

Messrs. Carpenter, Eppley, M. F. Welsh, Pyle, Hennick, White, Mrs. McConnell, Mrs. Welsh, Misses Harman and Preinkert, and one member from the Military Department.

COMMENCEMENT AND MARYLAND DAY

Messrs. T. H. Taliaferro, Richardson, House, Lytle, Thurston, Cory, Truitt, and Miss Mount.

EDUCATIONAL STANDARDS

Messrs. Appleman, Gordon, Johnson, Small, Zucker, Freeman, and Hillegeist.

FARMERS DAY

Messrs. Patterson, Symons, Waite, and Miss Mount.

GROUNDS AND ROADS

Messrs. Auchter, Thurston, Crisp, Patterson, Steinberg, Metzger, Carpenter, and Gwinner.

INSTRUCTION

Messrs. Cotterman, Creese, Gordon, Kemp, Lytle, Pickens, T. H. Taliaferro, Pierson, Auchter, Mrs. McFarland, Miss Preinkert, and Deans Ex-officio.

LIBRARY

Messrs. Appleman, W. T. L. Taliaferro, House, Steinberg, Zucker, and Miss Barnes.

PRE-MEDICAL EDUCATION

Messrs. Broughton, Cory, Davis, Spence, Wiley, and M. F. Welsh.

SANITATION

Messrs. Pickens, Griffith, Reed, W. T. L. Taliaferro, Pyle, Small, and Miss Mount.

STUDENT AFFAIRS

Messrs. Small, Byrd, Broughton, Johnson, Spence, Kemp, Creese, and Misses Stamp and McNaughton.

STUDENT BUSINESS AND AUDITING

Miss McKenney and Messrs. Spann, Hoshall, Shadick, and Bowers, and President of the Students' Assembly.

STUDENT LOANS

Misses McKenney and Preinkert, W. T. L. Taliaferro, and President of the Senior Class.

AGRICULTURAL EXPERIMENT STATION STAFF

HARRY J. PATTERSON, D.Sc..... Director and Chemist.

Agricultural Economics:

S. H. DEVAULT, A.M.....Agricultural Economics.
PAUL WALKER, M.S.....Assistant, Agricultural Economics.
W. J. HART, M.S.....Assistant, Agricultural Economics.

Agronomy:

J. E. METZGER, B.S., A.M.....Agronomy.
W. B. KEMP, B.S.....Associate, Agronomy.
G. EPPLEY, M.S.....Assistant, Agronomy.
R. G. ROTHGEB, M.S.....Assistant, Agronomy.
R. L. SELLMAN, B.S.....Assistant, Agronomy, and Superintendent of Farm.

Animal and Dairy Husbandry:

H. L. AYRES.....Specialist in Dairy Manufacturing.
DEVOE MEADE, Ph.D.....Dairy and Animal Husbandry.
B. E. CARMICHAEL, M.S.....Animal Husbandry.
L. W. INGHAM, M.S.....Assistant, Dairy Production.
R. C. MUNKWITZ, M.S.....Assistant, Market Milk.

Animal Pathology and Bacteriology:

E. M. PICKENS, A.M., D.V.M.....Animal Pathology.
H. B. MCDONNELL, M.S., M.D.....Pathological Chemist.
L. J. POELMA, D.V.M.....Assistant, Animal Pathology.

Botany:

Entomology:

E. N. CORY, Ph.D.....Professor, Entomology.
H. S. MCCONNELL, M.S.....Associate, Entomology.
PAUL KNIGHT, B.S.....Assistant, Entomology.
PAUL Z. PELTIER, B.S.....Assistant, Entomology.

Horticultural:

E. C. AUCHTER, Ph.D.....Horticulture.
F. W. GEISE, M.S.....Olericulture.
T. H. WHITE, M.S.....Olericulture and Floriculture.
A. L. SCHRADER, Ph.D.....Associate, Pomology.
V. R. BOSWELL, Ph.D.....Assistant, Olericulture.

Plant Pathology:

J. B. S. NORTON, M.S., D.Sc.....Plant Pathology.
R. A. JEHLE, Ph.D.....Associate, Plant Pathology.
A. J. MOYER, B.S.....Assistant, Plant Pathology.

Plant Physiology:

C. O. APPLEMAN, Ph.D.....Plant Physiology.
E. S. JOHNSTON, Ph.D.....Associate, Plant Physiology.
C. M. CONRAD, Ph.D.....Assistant, Plant Physiology.
C. L. SMITH, B.S.....Assistant, Plant Physiology.

Poultry Husbandry:

R. H. WAITE, B.S.....Poultry Husbandry.
GEO. D. QUIGLEY, B.S.....Assistant, Poultry Husbandry.

Seed Inspection:

F. S. HOLMES, B.S.....Inspector.
ANNA M. H. FERGUSON.....Assistant Analyst.
ELLEN EMACK.....Assistant Analyst.
OLIVE M. KELK.....Assistant Analyst.
RUTH M. MOSTYN.....Assistant Analyst.
KATHERINE SMITH.....Assistant Analyst.

Soils:

L. M. ERDMAN, Ph.D.....Soils.
R. R. MCKIBBEN, Ph.D.....Assistant, Soils.
J. M. SNYDER, B.S.....Assistant, Soils.
H. B. WINANT, M.S.....Assistant, Soils.

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‡F. B. Bomberger, B.S., A.M., D.Sc.	Assistant Director Specialist in Rural Organization and Marketing, and Chief, Maryland State Dept. of Markets.
E. I. Oswald, B.S.	Assistant Director.
*E. G. Jenkins	State Boys' Club Agent.
*Miss Venia M. Kellar, B.S.	State Home Demonstration Agent.
*Miss Dorothy Emerson	Girls' Club Agent.
*Helen Shelby, M.A.	District Agent and Clothing Specialist.
*Miss Margaret McPheeters, M.S.	District Agent and Nutrition Specialist.
†E. C. Auchter, M.S., Ph.D.	Specialist in Horticulture.
W. B. Ballard, B.S.	Specialist in Vegetable and Landscape Gardening.
H. R. Barker, B.S.	Specialist in Dairying.
M. D. Bowers, B.S.	Specialist in Agricultural Journalism.
†R. W. Carpenter, A.B., LL.B.	Specialist in Agricultural Engineering.
K. A. Clark, M.S.	Specialist in Animal Husbandry.
J. A. Conover, B.Sc.	Specialist in Dairying.
†E. N. Cory, M.S., Ph.D.	Specialist in Entomology.
†S. H. DeVault, A.M.	Specialist in Marketing.
H. A. Hunter, B.S.	Assistant in Plant Pathology.
L. M. Goodwin, B.S.	Specialist in Canning Crops.
†R. A. Jehle, B.S.A., Ph.D.	Specialist in Pathology.
†DeVoe Meade, Ph.D.	Specialist in Animal Husbandry.
F. W. Oldenburg, B.S.	Specialist in Agronomy.
W. H. Rice, B.S.	Specialist in Poultry.
†C. S. Richardson, A.M.	Specialist in Educational Extension.
P. D. Sanders, M.S.	Associate Entomologist.
S. B. Shaw, B.S.	Chief Inspector and Specialist in Marketing.
†W. T. L. Taliaferro, A.B., ScD.	Specialist in Farm Management.
†C. E. Temple, M.A.	Specialist in Plant Pathology.
F. B. Trenk, B.S.	Specialist in Forestry.
A. F. Vierheller, M.S.	Specialist in Horticulture.

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* In co-operation with the United States Department of Agriculture.
‡ On leave of absence.
† Devoting part time to Extension Work.

COUNTY AGENTS

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Allegany	*R. F. McHenry, B.S.	Cumberland.
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Baltimore	*W. C. Rohde, B.S.	Towson.
Calvert	*John B. Morsell, B.S.	Prince Frederick.
Caroline	*T. D. Holder, B.S.	Denton.
Carroll	*L. C. Burns, B.S.	Westminster.
Cecil	*T. H. Bartilson, B.S.	Elkton.
Charles	*G. R. Stuntz, B.S.	La Plata.
Dorchester	*Wm. R. McKnight, B.S.	Cambridge.
Frederick	*H. R. Shoemaker, B.S., M.A.	Frederick.
Garrett	*Jos. L. McGlone, B.S.	Oakland.
Harford	*H. M. Carroll, B.S. (Acting)	Bel Air.
Howard		Ellicott City.
Kent	*H. B. Derrick, B.S.	Chestertown.
Montgomery	*O. W. Anderson, M.S.	Rockville.
Prince George's	*W. B. Posey, B.S.	Upper Marlboro.
Queen Anne's	*E. W. Grubb, B.S.	Centerville.
St. Mary's	*G. F. Wathen	Loveville.
Somerset	*C. Z. Keller, B.S.	Princess Anne.
Talbot	*R. S. Brown	Easton.
Washington	*M. D. Moore, M.S.	Hagerstown.
Wicomico	*J. P. Brown, B.S.	Salisbury.
Worcester	*R. T. Grant, B.S.	Snow Hill.

Assistant County Agents

Harford	*W. H. Evans, B.S.	Bel Air.

Local Agents

Southern Md.	*J. F. Armstrong (Col.)	Seat Pleasant.
Eastern Shore	*L. H. Martin (Col.)	Princess Anne.

COUNTY HOME DEMONSTRATION AGENTS

Allegany	*Maude A. Bean	Cumberland.
Anne Arundel	*Mrs. G. Linthicum	Annapolis.
Baltimore	*Edythe Turner	Towson.
Caroline	*Bessie Spafford, B.S.	Denton.
Carroll	*Agnes Slindee, B.A.	Westminster.
Cecil	*Priscilla Pancoast, B.S.	Elkton.
Charles	*Ula Fay	La Plata.
Dorchester	*Hattie Brookes, A.B.	Cambridge.
Frederick	*Helen Pearson, B.S.	Frederick.
Garrett	*Elsie M. Benthien	Oakland.
Harford	*Eva K. Schurr, B.S.	Bel Air.

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Kent	*HELEN SCHELLINGER	Chestertown.
Montgomery	*BLANCHE A. CORWIN, B.S.	Rockville.
Prince George's	*ETHEL REGAN	Hyattsville.
St. Mary's	*ETHEL JOY	Leonardtown.
Talbot		Easton.
Washington	*MRS. LILLIAN FRAZER (Temporary)	Hagerstown.
Wicomico	*FLORENCE MASON, B.S.	Salisbury.
Worcester	*LUCY J. WALTER	Snow Hill.

Assistant Home Demonstration Agent

Frederick	*KATHERINE BAKER, B.S.	Frederick.

Local Home Demonstration Agent

Charles and St. Mary's	*LEAH W. HOPEWELL	La Plata.

Garden Specialist

Madison and Lafayette Aves. Administration Bldg., Balto.	MRS. ADELAIDE DERRINGER	Baltimore, Md.

* In co-operation with United States Department of Agriculture.

OFFICERS OF INSTRUCTION

At Baltimore

PROFESSORS

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HARVEY G. BECK, M.D., Sc.D., Professor of Clinical Medicine.
CHARLES F. BLAKE, M.D., A.M., Professor of Proctology.
CHARLES E. BRACK, Ph.G., M.D., Professor of Clinical Obstetrics.
JOHN H. BRANHAM, M.D., Professor of Clinical Surgery.
EDWARD N. BRUSH, M.D., Emeritus Professor of Psychiatry.
R. M. CHAPMAN, M.D., Professor of Psychiatry.
R. EARL CHRISTIAN, A.B., J.D., Professor of Law.
ALBERTUS COTTON, A.M., M.D., Professor of Orthopedic Surgery and Roentgenology.
ANNIE CRIGHTON, R.N., Superintendent of Nurses, Director of School of Nursing.
J. FRANK CROUCH, M.D., Emeritus Professor of Clinical Ophthalmology and Otology.
DAVID M. R. CULBRETH, A.M., Ph.G., M.D., Professor Emeritus of Botany and Materia Medica.
JOSE A. DAVILA, D.D.S., Professor of Clinical Operative Dentistry.
CARL L. DAVIS, M.D., Professor of Anatomy.
S. GRIFFITH DAVIS, A.B., M.D., Professor of Anaesthesia.
HORACE N. DAVIS, D.D.S., F.A.C.D., Professor of Exodontia, Anaesthesia, and Radiodontia.
GEORGE W. DOBBIN, M.D., Professor of Obstetrics.
J. W. DOWNEY, M.D., Clinical Professor of Otology.
A. G. DUMEZ, Ph.D., Professor of Organic Chemistry, Dean of School of Pharmacy.
G. C. EICHLIN, M.S., Professor of Physics.
PAGE EDMUNDS, M.D., Clinical Professor of Industrial Surgery.
ROBERT H. FREEMAN, A.B., A.M., LL.B., Professor of Law, Assistant Dean of School of Law.
EDGAR B. FRIEDENWALD, M.D., Clinical Professor of Pediatrics.
HARRY FRIEDENWALD, A.B., M.D., Professor of Ophthalmology and Otology.
JULIUS FRIEDENWALD, A.M., M.D., Professor of Gastro-Enterology.
WILLIAM S. GARDNER, M.D., Professor of Gynecology.
OREN H. GAVER, D.D.S., Professor of Physiology.
JOSEPH E. GICHNER, M.D., Professor of Clinical Medicine and Physical Therapeutics.
ANDREW C. GILLIS, A.M., M.D., Professor of Neurology and Clinical Psychiatry.
NEIL E. GORDON, Ph.D., Professor of Chemistry.
FRANK W. HACHTEL, M.D., Professor of Bacteriology.

HON. HENRY D. HARLAN, A.B., A.M., LL.B., LL.D., Dean of School of Law.

JOHN C. HEMMETER, M.C., Ph.D., Sc.D., LL.D., Emeritus Professor of Clinical Medicine.

JOSEPH W. HOLLAND, M.D., Clinical Professor of Surgery.

EDWARD HOFFMEISTER, A.B., D.D.S., Professor of Materia Medica and Therapeutics.

ROGER HOWELL, A.B., Ph.D., LL.B., Professor of Law.

J. MASON HUNDLEY, M.D., Professor of Clinical Gynecology.

BURT B. IDE, D.D.S., Professor of Operative Dentistry.

C. HAMPSON JONES, M.D., C.M., (Edinburgh), Professor of Hygiene and Public Health.

E.FRANK KELLY, Phar.D., Emeritus Professor of Chemistry, Advisory Dean of School of Pharmacy.

T. FRED LEITZ, M.D., Clinical Professor of Gastro-Enterology.

BENJAMIN T. LELAND, A.M., Professor of Industrial Education.

G. MILTON LINTHICUM, A.M., M.D., Professor of Diseases of Rectum and Colon.

G. CARROLL LOCKARD, M.D., Professor of Clinical Medicine.

A. J. LOMAS, M.D., P.P.H., Superintendent of the University Hospital.

EDWARD A. LOOPER, M.D., D.Oph., Clinical Professor of Diseases of the Nose and Throat.

FRANK S. LYNN, M.D., Clinical Professor of Surgery.

STANDISH MCCLEARY, M.D., Professor of Pathology and Clinical Medicine.

CHARLES W. MCELFRESH, M.D., Professor of Clinical Medicine.

ALEXIUS MCGLANNAN, A.M., M.D., LL.D., Professor of Surgery.

HOWARD J. MALDEIS, M.D., Professor of Embryology and Histology.

SAMUEL K. MERRICK, M.D., Emeritus Professor of Rhinology and Laryngology.

ROBERT L. MITCHELL, Phar.D., M.D., Professor of Physiology, Hygiene, Bacteriology, and Pathology.

L. E. NEALE, M.D., LL.D., Emeritus Professor of Obstetrics.

CHARLES O'DONOVAN, A.M., M.D., LL.D., Emeritus Professor of Clinical Medicines and Pediatrics.

J. EDGAR ORRISON, D.D.S., Emeritus Professor of Operative Dentistry.

ALEXANDER H. PATERSON, D.D.S., F.A.C.D., Professor of Prosthetic Dentistry.

MAURICE C. PINCOFFS, S.B., M.D., Professor of Medicine.

CHARLES C. PLITT, Ph.G., Sc.D., Professor of Botany and Materia Medica.

COMPTON RIELY, M.D., Clinical Professor of Orthopedic Surgery.

J. M. H. ROWLAND, M.D., Professor of Obstetrics, Dean of the School of Medicine.

EDWIN G. W. RUGE, A.B., A.M., LL.B., Professor of Law.

JOHN RUHRAH, M.D., Professor of Pediatrics.

ANTON G. RYTINA, A.B., M.D., Professor of Genito-Urinary Diseases.

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C. C. HABLISTON, M.D., Assistant Professor of Medicine.
SYDNEY S. HANDY, M.A., Assistant Professor of English.
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J. H. SCHAD, M.A., Assistant Professor of Mathematics.
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LECTURERS

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CARLYLE BARTON, A.B., LL.B., Lecturer in Partnership.
FORREST BRAMBLE, LL.B., Lecturer in Bills and Notes.
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JAMES T. CARTER, A.B., LL.B., Ph.D., Lecturer in Legal Bibliography.
W. CALVIN CHESTNUT, A.B., LL.B., Lecturer in Federal Procedure and Insurance.
WALTER L. CLARK, LL.B., Lecturer in Evidence.
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H. L. Sinsky, Ophthalmology.
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William J. Todd, M.D., Pediatrics.
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FACULTY COMMITTEES—1928-1929

At Baltimore

LIBRARY

(Medicine) Doctors Lynn, Ryon, Friedenwald, Cohen, and Wylie; (Dentistry) Doctors Gaver, Zelwis, Aisenberg, and McDonald; (Pharmacy) Mr. Plitt and Miss Cole; (Law) Messrs. Sappington and Freeman, and Mrs. Briscoe.

The Faculty Councils of the Baltimore Schools are included in the descriptive statements of the respective schools in Section II.

The Faculty Committees of the Baltimore schools are given in the separate announcements issued by the several schools.

SECTION I

General Information

HISTORICAL STATEMENT

The history of the present University of Maryland is the history of two institutions until they were merged in 1920. These were the Old University of Maryland in Baltimore and the Maryland State College in College Park.

The beginning of this history was in 1807, when a charter was granted to the College of Medicine of Maryland. The first class was graduated in 1810. A permanent home was established in 1814-1815 by the erection of the building at Lombard and Greene Streets in Baltimore, the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries (and the first medical school library) in the United States. In 1812 the General Assembly of Maryland authorized the College of Medicine of Maryland to "annex or constitute faculties of divinity, law and arts and sciences," and by the same act declared that the "colleges or faculties thus united should be constituted an university by the name and under the title of the University of Maryland." By authority of this act, steps were taken in 1813 to establish a "faculty of law," and in 1823 a regular school of instruction in law was opened. Subsequently there were added a college of dentistry, a school of pharmacy and a school of nursing. No significant change in the organization of the University occurred until 1920, more than one hundred years after the original establishment in 1812.

The Maryland State College was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed Western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Assembly of Maryland, and the Mary-

land Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 control was taken over entirely by the State. In 1916 the General Assembly granted a new charter to the College and made it the Maryland State College.

In 1920, by an act of the State Legislature, the University of Maryland was merged with the Maryland State College, and the name of the latter was changed to the University of Maryland.

All the property formerly held by the old University of Maryland was turned over to the Board of Trustees of the Maryland State College, and the name was changed to the Board of Regents of the University of Maryland. Under this charter every power is granted necessary to carry on an institution of higher learning and research. It provides that the University shall receive and administer all existing grants from the Federal Government for education and research and all future grants which may come to the State from this source. The University is co-educational in all its branches.

ADMINISTRATIVE ORGANIZATION

The government of the University is vested by law in a Board of Regents, consisting of nine members appointed by the Governor each for a term of nine years. The administration of the University is vested in the President. The University Senate and the Administrative Council act in an advisory capacity to the President. The composition of these bodies is given elsewhere.

The University organization comprises the following administrative divisions:

College of Agriculture.
Agricultural Experiment Station.
Extension Service.
College of Arts and Sciences.
College of Education.
College of Engineering.
College of Home Economics.
Graduate School.
Summer School.
Department of Military Science and Tactics.
Department of Physical Education and Recreation.
School of Dentistry.
School of Law.
School of Medicine.
School of Nursing.
School of Pharmacy.

The University faculty consists of the President, Deans, the instructional staffs of all the divisions of the University, and the Librarians. The faculty of each college or school constitutes a group which passes on all questions that have exclusive relationship to the division represented. The President is ex-officio a member of all of the faculties.

The organization and activities of the several administrative divisions are described in full in the appropriate chapters of Section II.

THE EASTERN BRANCH

The Eastern Branch of the University of Maryland is located at Princess Anne, Somerset County. It is maintained for the education of negroes in agriculture and the mechanic arts.

LOCATION

The University of Maryland is located at College Park, in Prince George's County, Maryland, on the line of the Washington Branch of the Baltimore and Ohio Railroad, eight miles from Washington and thirty-two miles from Baltimore. At least eight trains a day from each city stop at College Station, which makes the place easily accessible from all parts of the State. Telephone connection is made with the Chesapeake and Potomac lines.

The grounds front on the Baltimore and Washington Boulevard. The suburban town of Hyattsville is two miles to the south, and Laurel is ten miles to the north on the same road. Access to these towns and to Washington may be had by steam and electric railways.

The Schools of Medicine, Pharmacy, Dentistry and Law of the University are located in Baltimore at the corner of Lombard and Greene Streets.

EQUIPMENT

The Schools of Medicine, Pharmacy, Dentistry, and Law of the Uni- and Baltimore is as follows:

College Park

Grounds. The University grounds at College Park comprise about 300 acres. The site is healthful and attractive. The terrain is varied. A broad rolling campus is surmounted by a commanding hill which overlooks a wide area of surrounding country and ensures excellent drainage. Many of the original forest trees remain. Most of the buildings are located on this eminence. The adjacent grounds are laid out attractively in lawns and terraces ornamented with shrubbery and flower beds. Below the brow of the hill, on either side of the Washington-Baltimore Boulevard, lie the drill grounds and the athletic fields. The buildings of the Agricultural Experiment Station face the boulevard. The farm of the

College of Agriculture contains about 240 acres, and is devoted to fields, gardens, orchards, vineyards, poultry yards, etc., which are used for experimental purposes and demonstration work in agriculture and horticulture. With the assistance of the State Roads Commissioner, all of the highways on the campus were paved in 1927. The main road from the campus to the Baltimore & Ohio Railroad Station also has been paved.

Plans for the location of future buildings have been worked out with due regard to engineering problems and landscape effects.

The sanitary conditions are excellent, as shown by the absence for many years of epidemics in the student body.

The water supply and sewage disposal are provided by the Washington and Suburban Sanitary Commission.

Buildings. The equipment of buildings comprises about twenty individual structures which provide facilities for the several activities and services carried on at College Park.

Administration and Instruction. This group consists of the following buildings: The Agricultural Building, which accommodates the Executive Offices, the College of Agriculture, the College of Education, the College of Home Economics, the Agricultural and Home Economics Extension Service and the Auditorium; Morrill Hall, which accommodates in part the College of Arts and Sciences; Engineering Building, which houses the College of Engineering; Chemical Building for instruction in Chemistry and for State work in analysis of feeds, fertilizers and agricultural lime; Dairy Building; Horticultural Building; Stock Judging Pavilion; Poultry Buildings.

Experiment Station Group. This group consists of the main building, a large brick structure of the colonial period, housing the office of the Director, the office of the Dean of the Graduate School and laboratories for research in chemistry and plant physiology; other smaller buildings for housing the laboratories for research in soils and for seed testing; an agronomy building; a secondary horticulture building; and barns, farm machinery building, silos, and other structures required in agricultural research.

Physical Education. This group consists of the Ritchie Gymnasium, which provides quarters for the Military Department as well as for physical education; and the Byrd Stadium, with a seating capacity of 5,000 and furnished with dressing rooms for contestants, rest rooms for patrons and equipment for receiving and transmitting information concerning contests in progress.

Dormitories. Two dormitories, Calvert Hall and Silvester Hall, provide accommodations for 462 men students. Accommodations for 52 women students are provided by three buildings—Gerneaux Hall, a temporary structure, and the Practice House. The last serves also as a demonstration home for the College of Home Economics.

Service Structures. This group includes the Central Heating and Power Plant; the Infirmary with accommodations for twenty patients, physician's office, operating room and nursing quarters; Dining Hall; laundry.

New Buildings. The new Chemistry Building is now in use and provides first class facilities for all of the lines of Chemistry work conducted at College Park—in educational work, in research and in State supervisory work in connection with fertilizers and feeding stuffs.

An appropriation has been made by the Legislature for a new Library to be erected within the near future.

Buildings in Baltimore

The group of buildings located at the corner of Lombard and Greene Streets provides the available housing for the Baltimore division of the University. There are no grounds other than the sites of these buildings. The group comprises the original Medical School building erected in 1814, the University Hospital, and the Law School building. Full description of these parts of the University equipment are found in the chapters devoted to the Baltimore Schools in Section II.

Funds have been appropriated for a new Laboratory Building for the Schools of Dentistry and Pharmacy in Baltimore. Construction on this building will start in the near future. When completed, the building will provide ample facilities for these two Schools, and release space which is much needed for other departments of the Baltimore work.

Libraries

Libraries are maintained at both the College Park and the Baltimore branches of the University.

The Library at College Park is housed in a separate two-story building. The first floor is devoted to collected material relating to agriculture. The special catalogue cards issued by the United States Department of Agriculture make accessible the large number of State and national bulletins on agriculture and related scientific subjects. The general reference books and the reading room occupy the second floor. The Library is open from 8.15 A. M. to 5.30 P. M. Monday to Friday inclusive; Saturday from 8:15 A. M. to 12:30 P. M.; Sunday afternoon from 2:30 P. M. to 5:30 P. M., and all evenings except Saturday from 6:30 P. M. to 10 P. M. By action of the Governor of the State and the Legislature, provision has been made for a new library building which will be started in the near future.

The Library facilities in Baltimore for the Schools of Medicine, Law, and Pharmacy are consolidated and housed in Davidge Hall; those for the

School of Dentistry and the courses in Arts and Sciences are temporarily in the building at 6 and 8 Greene Street. The Library hours during the University years are from 9 A. M. to 10 P. M. daily, except Saturday, when it closes at 6 P. M.

The Libraries, including departmental libraries, contain a total of 46,000 bound volumes and large collections of unbound journals. In the two central libraries there are approximately 12,000 United States Government documents, unbound reports, and pamphlets.

Through the Inter-library Loan Systems of the Library of Congress, the United States Department of Agriculture and other Government Libraries, the University Library is able to supplement its reference material either by arranging for personal work in those Washington Libraries or by borrowing the books from them.

INCOME

The University is supported by funds appropriated for its use by the State and Federal Governments, fees from students and funds from other sources. The appropriations from the Federal Government are derived from the original Land Grant Act, the second Morrill Act, the Nelson Act, the Smith-Hughes Act, the Smith-Lever Act, the Hatch and Adams Acts, and the Purnell Act.

ENTRANCE

All communications regarding entrance should be addressed to the Registrar, who administers the entrance requirements for all departments of the University. Communications pertaining to entrance to the College Park Colleges should be addressed to the Registrar, University of Maryland, College Park, Maryland; those pertaining to the Baltimore Schools, to the Registrar, University of Maryland, Lombard and Greene Streets, Baltimore, Maryland.

GENERAL INFORMATION

Age of Applicants. No applicant who is less than sixteen years of age will be admitted to any of the Colleges or Schools of the University.

Entrance Preliminaries. Candidates for admission should apply as early as possible to the Registrar for the necessary forms for the transfer of preparatory credits. These forms after they are made out and signed by the high school principal should be returned to the Registrar. It is advisable for prospective students to attend to this preliminary as early as possible after graduation, in order to make sure that the units offered are sufficient and acceptable. A candidate who fails to attend to this preliminary may find after reaching the University that he cannot enter. The Registrar is always glad to advise with the students either by correspondence or in person concerning their preparation. The Registrar sends out a general state-

ment of the procedure for new students to follow after they are duly admitted to the University.

Time of Admission. Applicants for admission should plan to enter at the beginning of the school year in September. It is possible to be admitted to certain Colleges at the beginning of either semester, but students can seldom enter the University to advantage except at the opening of the school year.

Registration. Registration for the first semester, except for new students, takes place at the end of the second semester of the preceding year. Students register for the second semester during the week preceding final examinations of the first semester.

Late Registration. Students who do not complete their registration and classification on regular registration days will be required to pay $3.00 extra on the day following the last registration day and $2.00 for each additional day thereafter until their registration is completed. The maximum fine is $9.00.

After seven days from the opening of a semester, fees are imposed for a change of registration.

Students who, for any reason, are more than seven days late in registering must secure permission from the instructors in charge for admission to courses. Such permission must be given in writing to the student's dean before course cards will be issued.

Freshman Registration. Registration of freshmen for the first semester will take place Monday, September 24th, beginning at 9 A. M. All freshmen are expected to register on this date. Wednesday, Septemebr 26th is reserved for registering students of the three upper classes, and freshmen will not be registered on that day.

Dormitories will be ready for occupancy by freshmen Sunday, September 23rd.

A special freshman program is planned covering the time between registration day (September 24th) and the beginning of the instruction schedule (Thursday, September 27th), the object of which is to complete the organization of freshmen so that they may begin the regular work promptly and effectively on Thursday, the 27th, and to familiarize them with their new surroundings.

On or about September 1st the Registrar will send all prospective freshmen a detailed statement of this program.

REQUIREMENTS FOR ADMISSION

In general, the requirements for admission to the freshman class are the same as those prescribed for graduation by the approved high schools of Maryland.

High or preparatory school work is evaluated on the basis of "units." A unit represents a year's study in any subject in a secondary school, and constitutes approximately one-fourth of a full year's work. It pre-supposes a school year of 36 to 40 weeks, recitation periods of from 40 to 60 minutes, and for each study four or five class exercises a week. Two laboratory periods in any science or vocational study are considered as equivalent to one class exercise.

Normally, not more than three units are allowed for four years of English. If, however, a fifth course in English has been taken, an extra unit will be allowed.

Fifteen units, the equivalent of a four-year high school curriculum, are required for admission to all the undergraduate colleges. The additional and special requirements for admission to the professional schools and the Graduate School are given in detail in the chapters devoted to those schools.

Prescribed Units. The following units are required of all candidates for admission:

English	3
*Mathematics (Algebra to Quadratics, 1 Unit; Plane Geometry, 1 Unit)	2
Science	1
History	1
Total Prescribed	7

In addition to these seven prescribed units, the following are required:

(a) For the Pre-Medical curriculum: two years of foreign language.

(b) For the Engineering and the Industrial Chemistry curriculums, an additional unit and a half of mathematics, consisting of algebra, completed, one unit; solid geometry, one-half unit.†

Students entering with conditions in prescribed subjects must remove such conditions before enrolling for the second year.

Elective Units. In addition to the prescribed units, a sufficient number of units to make a total of fifteen must be offered from the following elective subjects:

Agriculture	Geology
Astronomy	History
Biology	Home Economics
Botany	Industrial Subjects
Chemistry	Language
Civics	Mathematics
Commercial Subjects	Music
Drawing	Physical Geography
Economics	Physics
English	Physiology
General Science	Zoology

* Commercial mathematics will not satisfy the mathematics entrance requirements, but will be accepted as elective subjects.

† See statement on page 109 concerning admission to the College of Engineering.

METHODS OF ADMISSION

Students are admitted to the University by certificate from approved preparatory schools, by transfer from other colleges or universities, or by examination.

Admission by Certificate from Approved Preparatory Schools. Graduates of the high schools of Maryland and the District of Columbia will be admitted, as heretofore, without examinations. High school principals will indicate on the application forms whether or not the candidate is "certified" or "non-certified". Graduates who are certified in accordance with the regulations of the State Board of Education will be admitted to full regular standing. Graduates who are not eligible to such certification will be admitted on probation, the period of probation to be eight weeks. Students so admitted, who within that period do satisfactory work, will be placed on full regular standing at the end of that period; those whose work is doubtful will be continued on probation until the end of the first semester; those whose work indicates failure will be advised to withdraw and their parents so notified.

A candidate for admission by *certificate* must be a *graduate* of an approved secondary school and be recommended by his high school principal. Non-resident applicants must attain the college recommendation grade of their schools.

The following groups of secondary schools are approved:

(1) Secondary schools approved by the Maryland State Board of Education.

(2) Secondary schools accredited by the Association of Colleges and Preparatory Schools of the Southern States.

(3) Secondary schools accredited by the North Central Association of Colleges and Secondary Schools.

(4) Secondary schools accredited by the State Universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.

(5) Secondary schools approved by the New England College Entrance Certificate Board.

(6) High schools and academies registered by the Regents of the University of the State of New York.

(7) High and preparatory schools on the accredited list of other State Boards of Education where the requirements for graduation are equivalent to the standard set by the Maryland State Board of Education.

(8) State Normal Schools of Maryland and other State Normal Schools having equal requirements for graduation.

For admission by certificate the applicant should file, with the Registrar of the University as soon as possible after the close of the school year in June, a certificate of recommendation made out on the blank form furnished by the University.

Admission by Transfer from Other Colleges or Universities. A candidate for admission by transfer from another College or University must present evidence that he has maintained a satisfactory and honorable record at the institution which he has attended, in addition to having satisfied the entrance requirements of the University of Maryland.

For admission by transfer the applicant should file with the Registrar as soon as possible after the close of the school year in June a Certificate of Recommendation made out on the blank form furnished by the University. In addition he should have furnished the Registrar, by the institution he has attended, a complete official transcript of his record, together with a statement of honorable dismissal.

Advanced Standing. Advanced standing is granted to students transferring from institutions of collegiate rank for work completed which is equivalent in extent and quality to the work of the University of Maryland, subject to the following provisions:

(1) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree with less than one year of resident work.

(2) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree until he has satisfied the full requirements of the curriculum he may elect.

(3) In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded it elsewhere, the University reserves the right to revoke at any time any credit allowed.

(4) Credit will not be allowed for more than one-fourth of those courses in which the grade is the lowest passing grade of the college attended.

An applicant may request examination for advanced credit in any subject.

Admission by Examination. Candidates who are not eligible for admission by certificate or by transfer will be admitted by presenting evidence of having passed the examinations of either the College Entrance Examination Board or the New York Regents' Examinations covering work sufficient to meet the entrance requirements.

The University does not give entrance examinations, but accepts certificates of the College Entrance Examination Board and the New York Regents' Examinations.

The certificate of the College Entrance Examination Board, showing a grade of 60 per cent. or higher,will be accepted as satisfying the entrance requirements in a subject. These examinations are held at various points

once a year, beginning the third Monday in June. Full information regarding these examinations may be obtained from the Secretary of the College Entrance Examination Board, 431 W. 117th Street, New York City.

Credit also will be allowed for examinations conducted by the Regents of the University of the State of New York.

Unclassified Students. Mature students who have had insufficient preparation to pursue any of the four-year curricula may matriculate, with the consent of the Committee on Entrance, for such subjects as they are fitted to take. These students, however, will be ineligible for degrees.

HEALTH SERVICE

PHYSICAL EXAMINATIONS

As soon as possible after the opening of the fall semester, as a measure for protecting the health of the student body, all students who enter the undergraduate colleges at College Park are given a physical examination. The examination of the men students is conducted by the College Physician in co-operation with the Military Department. The examination of the women students is conducted by a woman physician especially employed for this purpose in co-operation with the Instructor of Physical Education for Women.

RULES GOVERNING MEDICAL SERVICE

1. All students, paying the fixed University charges, who report at the Infirmary shall be given medical attention and medicine, except for special conditions, such as major operations, eye, ear, nose work, etc.

2. Students residing on the campus when too sick to report at the Infirmary in person will be visited in their rooms by the University Physician or nurse. Except in emergencies, such cases of illness should be reported at the usual hours at the Infirmary.

3. Students residing in fraternity, sorority, or boarding houses adjacent to and approved by the University will be treated by the University Physician the same as students living on the campus. When practicable, sickness should be reported before 9 A. M. to the University Physician (phone Berwyn 68) or Infirmary (Berwyn 85-M).

4. Students living at home with relatives or guardians shall not be entitled to medical attention in their homes unless injured in some form of University activity.

5. Students residing in fraternity, sorority, or boarding houses may, upon order of the University Physician, be cared for in the Infirmary. Such students shall pay the University an extra charge of $1.00 per day to cover cost of food and service from the Dining Hall.

6. The University Physician will give medical supervision and treatment to employees of the University (but not their families) who work in the kitchen, dining hall, dormitories, and dairy.

7. Members of the faculty, clerical force, and students not paying fixed charges shall *not* be entitled to *free* treatment or medical attention by the University Physician or nurse, or to have the use of the Infirmary.

REGULATIONS, GRADES, DEGREES

REGULATION OF STUDIES

Course Numbers. Courses for undergraduates are designated by numbers from 1—99; courses for advanced undergraduates and graduates, by numbers, 100—199, and courses for graduates, by numbers, 200—299.

The letter following the number of a course indicates the semester in which it is offered; thus, course 1f is offered in the first semester; 1s, in the second semester. The letter "y" indicates a full-year course. The number of hours' credit for each course is indicated by the arabic numeral in parenthesis following the title of the course.

Schedule of Courses. The semester schedules of days, hours, and rooms are issued as a separate pamphlet at the beginning of each semester.

Definition of Credit Unit. The semester hour, which is the unit of credit in the University, is the equivalent of a subject pursued one period a week for one semester. Two or three priods of laboratory or field work are equivalent to one lecture or recitation period. The student is expected to devote three hours a week in classroom or laboratory or in outside preparation for each credit hour in any course.

Number of Hours. The normal student load is from 15 to 19 semester hours, according to curriculum and year. These variations are shown in the appropriate chapters in Section II describing the several divisions of the University. No student may carry either more or less than the prescribed number of hours without specific permission from the Dean of his division.

EXAMINATIONS AND GRADES

Examinations. Examinations at the end of each semester complete the studies pursued to that point.

Grading. The system of grading is uniform in the different departments and divisions of the University.

The following grade symbols are used: A, B, C, D, E, F, and I. The first four, A, B, C, and D, are passing; E, condition; F, failure; I, incomplete.

Grade "A" denotes superior scholarship; grade "B," good scholarship; grade "C," fair scholarship, and grade "D," poor, but passing scholarship.

A student who receives the grade "D" in more than one-fourth of the credits required for graduation must take additional courses or repeat courses until he has the required number of credits for a degree, three-fourths of which carry a grade above "D."

A student with a grade of "E" is conditioned. The grade "E" indicates that though the student has not failed in a course, he has not presented sufficient evidence to pass; in the opinion of the instructor his record in the course has been sufficiently good to justify the presumption that he may secure a passing grade by a re-examination or by additional work without repeating the course. The grade "E" cannot be raised to a higher grade than "D." A condition not removed within the succeeding semester becomes a failure.

The mark of "I" (Incomplete) is given only to those students who have a proper excuse for not completing all the requirements of a course. The mark of "I" is not used to signify work of inferior quality. In cases where this grade is given the student must complete the work assigned by the instructor by the end of the first semester in which that subject is again offered, or the mark becomes "F."

Work of grade "D." or of any passing grade, cannot be raised to a higher grade except by repeating the course. A student who repeats a course for which he has received credit for work done at this University or elsewhere, must meet all the requirements of the course, including regular attendance, laboratory work, and examinations. His final grade will be substituted for the grade already recorded, but he will not receive any additional credit for the course.

REPORTS

Written reports of grades are sent by the Registrar to parents or guardians at the close of each semester.

ELIMINATION OF DELINQUENT STUDENTS

The University reserves the right to request at any time the withdrawal of a student who cannot or does not maintain the required standard of scholarship, or whose continuance in the University would be detrimental to his or her health or to the health of others, or whose conduct is not satisfactory to the authorities of the University. *Students of the last class may be asked to withdraw even though no specific charge be made against them.*

DEGREES AND CERTIFICATES

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, and Bachelor of Science in Pharmacy.

Students in the two-year and three-year curricula are awarded certificates.

The requirements for graduation vary according to the character of work in the different colleges and schools. For full information regarding

the requirements for graduation in the several colleges consult the appropriate chapters in Section II.

No baccalaureate degree will be awarded to a student who has had less than one year of resident work in this University. The last thirty credits of any curriculum leading to a baccalaureate degree must be taken in residence at College Park.

At least three-fourths of the credits required for graduation must be earned with grades of A, B, or C.

EXPENSES

MAKE ALL CHECKS PAYABLE TO THE UNIVERSITY OF MARYLAND FOR THE EXACT AMOUNT OF THE SEMESTER CHARGES.

In order to reduce the cost of operation, all fees are due and payable as a part of the student's registration, and all persons must come prepared to pay the full amount of the semester charges. No student will be admitted to classes until such payment has been made.

EXPENSES AT COLLEGE PARK

The following table gives the minimum amounts which must be paid per semester by all regular resident students at College Park:

	First	Second	Total
Fixed Charges	$ 57.50	$ 57.50	$115.00
Library Fee	5.00	....	5.00
Athletic Fee	15.00	....	15.00
Reserve Fee	5.00	....	5.00
*Special Fee	10.00	....	10.00
Minimum Charge to All Students	$ 92.50	$ 57.50	$150.00
Board	135.00	135.00	270.00
Lodging	38.00	38.00	76.00
Laundry	13.50	13.50	27.00
	$279.00	$244.00	$523.00

In addition to the above regular charges the following special fees will be charged as indicated:

$5.00 matriculation fee to students registering for the first time.
$62.50 per semester to non-resident students.
$125.00 per semester to non-resident students taking pre-medical work.
$10.00 diploma fee.
$5.00 certificate fee.

* This fee, established by special request of the Student Council for a period of two years, is for the purpose of further improving the University grounds and the physical training facilities.

$1.00 condition examination fee.
$2.00 per semester for each laboratory course in Bacteriology.
$1.00 fee for change in registration after first week.
$1.00 fee for failure to file schedule card in Registrar's office within one week after opening of semester.

Late Registration Fee. Students who do not complete their registration and classification on regular registration days will be required to pay $3.00 extra on the day following the last registration day, and $2.00 for each additional day thereafter until their registration is completed. The maximum fee is $9.00.

Absence Fee. In cases of absence 24 hours before, or 24 hours after classes close or begin, respectively, for a vacation, a student will be penalized by the payment of a special fee of $3.00 for each class missed.

Graduate Fees. The fees paid by graduate students are as follows:

Matriculation fee	$10.00
Per semester credit hour	1.50
Diploma fee	10.00

EXPLANATIONS

The Fixed Charges made to all students are a part of the overhead expenses not provided for by the State, such as laboratory supplies and service, infirmary and physical training costs, and other general expense.

The Board, Lodging, and Laundry charge may vary from semester to semester, but every effort will be made to keep expenses as low as possible.

The Library Fee is designed to cover in part the cost of wear and tear on library books.

The Reserve Fee will be returned at the close of the year, less any damage charges. Students who have occupied rooms without first signing the room register kept by the Dormitory Manager at his office in Room 121, Silvester Hall, or who have moved from rooms assigned to them, or who have removed articles of furniture without his approval will forfeit the reserve fee. Any damages or other charges which may be shown on their clearance slips will be collected in addition to this forfeiture.

The Athletic Fee constitutes a fund which is collected from all students in the University at College Park for the maintenance of athletics, and the entire amount is turned over to the Athletic Director for disbursement. This fund is audited annually by the State Auditors.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration their parents or guardians have been residents of this State or the District of Columbia for at least one year.

Adult students are considered to be resident students if, at the time of their registration, they have been residents of this State for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless his parents or guardians move to and become legal residents of this State.

MISCELLANEOUS INFORMATION

In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

Board and lodging may be obtained at boarding houses or in private families, if desired.

Students not rooming in the dormitories may obtain board and laundry at the University at the same rates as those living in the dormitories.

Day students may get lunches at nearby lunch rooms.

The costs of books and supplies and personal needs will vary according to the tastes and habits of the individual student. Books and supplies average about $40.00 per year.

No diploma will be conferred upon, nor any certificate granted to a student who has not made satisfactory settlement of his account.

DORMITORY RULES AND REGULATIONS

The office of the Dormitory Manager is located in Room 121, Silvester Hall. Each dormitory student, after registering, will proceed immediately to the Dormitory Manager's office to receive his room key and take possession of his room. Instructions regarding the rules for the dormitories will be given to the student at this time.

All freshman boys, except those who live at home, are required to room in the dormitories and board at the University dining hall.

All dormitory property assigned to the individual student will be charged against him, and the parent or guardian must assume responsibility for its possession without destruction other than that which may result from ordinary wear and tear.

All students assigned to dormitories are required to provide themselves with sufficient single blankets, at least two pairs of single sheets, three pillow cases, six towels, a pillow, a laundry bag, a broom, and a waste basket.

Room Reservations. All students who are to room in the dormitories must register their names and selection of rooms with the Dormitory Manager, and deposit $5.00 with the Cashier as a reserve fee. This fee will be deducted from the first semester charges when the student registers; if he fails to register, the fee will be forfeited. Reservations may be made at any time during the closing month of the school year by students already in the University. Students who are applying for admission to the University should signify their desire to reserve a room, and accompany this request with a remittance of $5.00.

Keys. Students who withdraw from the dormitories at any time and fail to surrender their keys to the Dormitory Manager immediately will be subject to a charge of $1.00.

WITHDRAWALS

Students registering for the dormitories and dining hall must continue for the year, as contracts for faculty and other service and for supplies are made on an annual basis, and fees are fixed on the supposition that students will remain for the entire year.

A student desiring to withdraw from the University must secure the written consent of the parent or guardian, to be attached to the withdrawal slip, which must be approved by the Dean and presented to the Registrar at least one week in advance of withdrawal. Charges for full time will be continued against him unless this is done. Withdrawal slips must bear the approval of the President and the Financial Secretary before being presented to the Cashier for refund.

REFUNDS

For withdrawal within five days full refund of fixed charges, library fee, athletic fee, and reserve fee, with a deduction of $5.00 to cover cost of registration. All refunds for board, lodging, and laundry will be pro-rated.

After five days, and until November 1, refunds on all charges will be pro-rated, with a deduction of $5.00 to cover cost of registration.

After November 1, refunds will be granted for board and laundry only, amounts to be pro-rated.

No refunds will be made without the written consent of the student's parent or guardian, except to students who pay their own expenses.

No student will be given cash for any part of his or her refund until all outstanding checks have been honored by the bank on which they are drawn.

EXPENSES AT BALTIMORE

The fees and expenses for the schools located in Baltimore are:

		Tuition			
	Matriculation	Resident	Non-Resident	Laboratory	Graduation
Medicine	$10.00 (once only)	$300.00	$400.00	$20.00 yr.	$10.00
*Dentistry	10.00 (once only)	200.00	250.00	20.00 yr.	10.00
Pharmacy	10.00 (once only)	200.00	250.00	....	10.00
Law (night)	10.00 (once only)	150.00	200.00	....	10.00
(day)	10.00 (once only)	200.00	250.00	....	10.00

Applicants for admission to any of the schools are charged a record investigation fee of $2.00.

*Students are required to pay, once only, a dissecting fee of $15.00.
Note—Late registration fee, $5.00.

STUDENT EMPLOYMENT

A considerable number of students earn some money through employment while in attendance at the University. No student should expect to earn enough money to pay all of his expenses. The amounts vary from nearly nothing to one-half or three-fourths of all the required funds for a college education.

Generally the first year is the hardest for students desiring employment. After the student has demonstrated that he is worthy and capable, there is much less difficulty finding employment.

The University assumes no responsibility in connection with employment. It does, however, maintain a bureau to aid students who desire employment. The nearby towns and the University are canvassed, and a list of available positions is placed at the disposal of the students.

HONORS AND AWARDS

SCHOLARSHIP HONORS AND AWARDS

Scholarship Honors. Final honors for excellence in scholarship are awarded to one-fifth of the graduating class in each college. *First honors* are awarded to the upper half of this group; *second honors* to the lower half.

The Goddard Medal. The James Douglas Goddard Memorial Medal is awarded annually to the man from Prince George's County who makes the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Anne K. Goddard James, of Washington, D. C.

Sigma Phi Sigma Medal. The Delta Chapter of Sigma Phi Sigma Fraternity offers annually a gold medal to that freshman who makes the highest scholastic average during the first semester.

Alpha Zeta Medal. The Honorary Agricultural Fraternity of Alpha Zeta awards annually a medal to the agricultural student in the freshman class who attains the highest average record in academic work. The mere presentation of the medal does not elect the student to the fraternity, but simply indicates recognition of high scholarship.

Dinah Berman Memorial Medal. The Dinah Berman Memorial Medal is awarded annually to that sophomore who has attained the highest scholastic average of his class in the College of Engineering. The medal is given by Benjamin Berman.

Interfraternity Scholastic Trophy. The Delta Mu Fraternity has presented to the University a silver trophy, which is awarded annually to that fraternity which had the highest average in scholarship for the preceding scholastic year. It becomes the permanent property of the fraternity that wins it three times.

Chemical Alumni Scholarship. The Chemical Alumni of the University of Maryland give a scholarship to the boy or girl in the State writing the best essay, as a result of the National Prize Essay Contest, of the American Chemical Society.

The Sigma Delta Sorority offers annually a loan of one nundred dollars ($100.00), without interest, to any woman student registered in the University of Maryland and selected by the Scholarship Committee—the said Committee to be composed of the deans of all Colleges in which girls are registered, including the Dean of Women and the Dean of the Graduate School.

PUBLIC SPEAKING AWARDS

President's Cup for Debate. An annual debate is held each year in January between the Poe and New Mercer Literary Societies for the "President's Cup," given by Dr. H. J. Patterson.

Alumni Medal for Debate. A gold medal is awarded by the Alumni Association each year to the best debater in the University, the test being a debate between picked teams from the two literary societies.

Public Speaking Prize. A prize of $25.00 in gold is given annually by Mr. W. D. Porter, of Hyattsville, Maryland, to be awarded to that student in the University who makes most improvement in the ability "to stand and think and to so express his thoughts while standing as to transmit them to his fellow-men accurately and in a common-sense way."

The Oratorical Association of Maryland Colleges, consisting of Washington College, Western Maryland College, St. John's College, and University of Maryland, offers each year gold medals for first and second places in an oratorical contest that is held between representatives of the four institutions.

OTHER MEDALS AND PRIZES

Athletics. The class of 1908 offers annually to "the man who typifies the best in college athletics" a gold medal. The medal is given in honor of former President R. W. Silvester, and is known as "The Silvester Medal for Excellence in Athletics."

Military Medal. The class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best-drilled soldier.

Company Sword. The class of 1897 awards annually to the captain of the best-drilled company of the University battalion a silver-mounted sword.

Citizenship Prize. A gold medal is presented annually by H. C. Byrd, a graduate of the class of 1908, to the member of the senior class who, during his collegiate career, has most nearly typified the model citizen, and

has done most for the general advancement of the interests of the University.

Citizenship Prize for Women. The Citizenship Prize is offered by Mrs. Albert F. Woods to the woman member of the senior class who, during her collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

STUDENT ACTIVITIES

The following description of student activities covers those of the undergraduate divisions at College Park. The description of student activities in the Baltimore divisions is included in the appropriate chapters in Section II.

GOVERNMENT

Regulation of Student Activities. The association of students in organized bodies, for the purpose of carrying on voluntary student activities in orderly and productive ways, is recognized and encouraged. All organized student activities, except those which are controlled by a special board or faculty committee, are under the supervision of the Committee on Student Affairs, subject to the approval of the President. Such organizations are formed only with the consent of the Committee on Student Affairs and the approval of the President. Without such consent and approval no student organization which in any way represents the University before the public, or which purports to be a University organization or organization of University Students, may use the name of the University in connection with its own name, or in connection with its members as students.

The "Students' Handbook," issued annually and distributed to the students in the fall, contains full information in regard to student activities as well as in regard to academic regulations. Some of the more important items are given here.

Eligibility to Represent the University. Only students in good standing are eligible to represent the University in extra-curricular contests. No student while on probation may represent the University in such events as athletic contests, glee club concerts, dramatic performances, and debates.

Discipline. In the government of the University, the President and faculty rely chiefly upon the sense of responsibility of the students. The student who pursues his studies diligently, attends classes regularly, lives honorably, and maintains good behavior meets this responsibility. In the interest of the general welfare of the University, those who fail to maintain these standards are eliminated. Students are under the direct supervision of the University only when on the campus, but they are responsible to the University for their conduct wherever they may be.

Student Government. The General Students' Assembly consists of all the students and is the instrument for student government. It operates under

a constitution. Its officers are a President, Vice-President and Secretary, and an Executive Council representative of the several college classes.

The Students' Assembly meets the second Wednesday of each month at 11.20 o'clock in the Auditorium for the transaction of business which concerns the whole student body. On alternate Wednesdays a program is arranged by the officers with the aid of the Department of Public Speaking. The Students' Executive Council, with the aid of the Committee on Student Affairs, which acts as an advisory board to the Council, performs the executive duties incident to managing student affairs.

Women Students' Government Association is an organization comprising all the women students, for the management of all affairs concerning the women students exclusively. It operates under a constitution. Its officers are the same as those of the General Students' Assembly. Its Executive Council has the advisory co-operation of the Dean of Women.

SOCIETIES

Honorary Fraternities. There are nine honorary fraternities and societies in the University at College Park, organized to uphold scholastic and cultural standards in their respective fields. These are: Phi Kappa Phi, a national honorary fraternity open to honor students, both men and women, in all branches of learning; Alpha Zeta, a national honorary agricultural fraternity recognizing scholarship and student leadership; Omicron Delta Kappa, men's national honor society, recognizing conspicuous attainments in extra curricular activities and general leadership; Sigma Delta Phi, a national honorary Spanish fraternity; Alpha Chi Sigma, a national honorary chemical fraternity; Scabbard and Blade, a national military society; Phi Mu, a local honorary engineering fraternity; The Women's Senior Honor Society, a local organization recognizing conspicuous attainments; Theta Gamma, a local Home Economics society.

Fraternities and Sororities. There are seven national and six local fraternities, and one national and three local sororities at College Park. These in the order of their establishment at the University are: Kappa Alpha, Sigmi Phi Sigma, Sigma Nu, Phi Sigma Kappa, Delta Sigma Phi, Phi Alpha, and Tau Epsilon Phi (national fraternities), and Alpha Omicron Pi (national sorority); and Nu Sigma Omicron, Delta Psi Omega, Delta Mu, Sigma Tau Omega, Alpha Gamma (local fraternities), and Alpha Phi Sigma, which is now functioning as a club; and Sigma Delta, Kappa Xi, and Alpha Upsilon Chi (local sororities).

Miscellaneous Clubs and Societies. Many clubs and societies, with literary, scientific, social, and other special objectives, are maintained in the University. Some of these are purely student organizations; others are conducted jointly by students and members of the faculty. The list is as follows: Authorship Club, Engineering Society, Horticultural Society, Latin American Club, Le Circle Francais, Live Stock Club, New Mercer

Literary Society, Poe Literary Society, Calvert Forum, Women's Athletic Association, Girls' "M" Club, Footlight Club, Debating Team, Rossbourg Club.

Student Grange. The Student Grange is a chapter of the national fraternity. With the exception of two faculty advisers, the Student Grange membership is made up entirely from the student body. New members are elected by ballot when they have proved their fitness for the organization.

The general purposes of the Student Grange are to furnish a means through which students keep in touch with State and national problems of agricultural, economic, or general educational nature; to gain experience in putting into practice parliamentary rules; to learn the meaning of leadership and to learn how to assume leadership that aids in the ultimate task of serving in one's community.

MUSICAL ORGANIZATIONS

Five musical organizations are maintained in the University.

Chorus. Membership in the Chorus is open to all students, and to persons residing in the community. Oratorios and standard part-songs are studied. Rehearsals are held weekly. The Chorus presents an annual festival of music in May.

Glee Club. A Glee Club, of limited membership, is recruited from the best vocal talent among the men of the University. Admission is gained through tests or "try-outs," conducted at the beginning of the school year. The club holds three rehearsals a week. Public concerts are given.

Opera Club. The "Maryland Opera Club" was established in 1923, and gave its first performance in the spring of 1924. Its object is to foster and promote music in connection with dramatic art, and to develop and direct musical talent of students in the University. One or more public performances are given each year.

Symphony Orchestra. It is the purpose of the Symphony Orchestra to study the classics. Works of the standard symphonists from Haydn and Mozart to Wagner and the modern composers are used. Students are eligible for membership who play orchestral instruments. At least one rehearsal of two hours' duration is held each week, and all players are expected to take part in public performances.

Military Band. This organization, of limited membership, is a part of the military organization of the University, and is subject to the restrictions and discipline of the Department of Military Science and Tactics.

Student Band. The Student Band is the outcome of a long felt need for organized band music at the various functions of the University including athletic activities. This organization meets once a week.

RELIGIOUS INFLUENCES

Religious Work Council. The Religious Work Council, comprising the President of the University, acting as chairman, all Student Pastors officially appointed by the Churches for work with the students of their respective faiths, and representatives of the religious organizations of the students, focalizes, reviews, and stimulates the religious thought and activity of the student body. This Council has an executive secretary with an office in the Agricultural Building, who is daily at the service of the students and the churches.

Every assembly of the University is opened with religious exercises conducted by one of the Student Pastors or by some other clergyman secured for the purpose.

While there is no interference with any one's religion, religion itself is recognized, and every possible provision made that the student may keep in contact with the church of his choice.

The Christian Associations. The Young Men's Christian Association and the Young Women's Christian Association serve primarily as agencies for co-ordinating and directing the religious activities of the men and women students, respectively. In addition, they perform other important functions, such as welcoming new students, assisting in obtaining employment for worthy students, and promoting morale and good fellowship in the student body. The two Associations, in co-operation with the Committee on Student Affairs, publish and distribute free of charge the Students' Handbook to each student at the beginning of the scholastic year. This handbook contains detailed information in regard to registration, academic regulations, and student activities. The Y. M. C. A. maintains a secretary, who divides his time between the College Park and Baltimore branches of the University.

The Program Committees of the two Associations provide organized programs of religious study running through the college year.

The Discussion Group, organized and conducted by the students, meets Sunday evening for the discussion of important religious, social, and political questions, both national and international.

The Episcopal Club. The Episcopal Club is an organization of the Episcopal students (both men and women) and their friends, banded together for mutual fellowship and Christian service. It is a duly recognized unit of the National Student Council of the Protestant Episcopal Church.

STUDENT PUBLICATIONS

The two student publications are conducted under the supervision of the Faculty Committee on Student Publications.

The Diamondback. A weekly, six page newspaper, the Diamondback, is published by the students. This publication summarizes the University

news, and provides a medium for discussion of matters of interest to the students and the faculty.

The Reveille is the student annual, published by the Junior Class. It is a reflection of student activities serving to commemorate the outstanding events of the college year.

ALUMNI ORGANIZATION

The University has no general alumni association. The alumni are divided into several organizations, which elect representatives to the Alumni Council, an incorporated body which manages all general alumni affairs.

The different alumni units represent the Medical School, the Pharmacy School, the Dental School, the Law School, the School of Nursing, the School of Business Administration. One unit represents the group of colleges at College Park. This College Park unit operates as a general alumni association, and is governed by a board made up of representatives from each of the colleges located at College Park.

The Alumni Council is made up of elected representatives from the several units, with a membership of twenty-four. Each alumni unit in Baltimore elects two representatives to the Council; the alumni representing the College Park group of colleges elect twelve representatives. W. P. Cole, Jr., of Towson, Md., a graduate of the Engineering College and also a graduate of the Law School, is President of the Alumni Council.

SECTION II
Administrative Divisions

COLLEGE OF AGRICULTURE

HARRY J. PATTERSON, *Dean*

Agriculture is the primary pursuit of the human race, and permanent prosperity is in direct proportion to the producing capacity of the land. Land-Grant Colleges were founded to foster the teaching of scientific agriculture. The primary aim of the College of Agriculture of the University of Maryland is to teach the best and most practical methods of farm production, the economics of marketing and distribution, and methods of improving the economic and social position of the farmer. Agriculture is constantly changing; no cropping system can be worked out once and for all time; new as well as old pests and diseases must be constantly combated; better feeding and breeding of live stock and more efficient marketing methods must be substituted for the old and inefficient methods if agriculture is to maintain its importance with the other industries. Above all, agriculture must be made profitable to the tiller of the soil and must be established as a paying business for those who engage in it, as well as for town and city dwellers.

The curricula of the College of Agriculture are planned to give the student thorough and practical instruction in agriculture and related sciences, and at the same time afford an opportunity to specialize along the lines in which he is particularly interested. Likewise, instruction is given which will prepare students for teaching positions in agriculture, for governmental investigation and experimental work, for positions as county agents, farm bureau leaders, farm supervisors, as well as for farming.

Departments

The College of Agriculture includes the following departments: Agricultural Economics; Agronomy (including Crops and Soils); Animal Husbandry; Bacteriology; Botany; Dairy Husbandry; Entomology and Bee Culture; Farm Forestry; Farm Management; Farm Mechanics; Genetics and Statistics; Horticulture (including Pomology, Vegetable Gardening, Landscape Gardening, and Floriculture); Plant Pathology; Plant Physiology and Bio-chemistry; Poultry Husbandry; Veterinary Medicine.

Admission

The requirements for admission are the same as for other colleges and schools. See Section I, "Entrance."

Requirements for Graduation

One hundred and thirty-four semester hours are required for graduation. The prescribed work is the same for all freshmen and sophomores (except for those specializing in Bacteriology, Botany, Floriculture, Landscape Gardening, and Entomology); thereafter the work required varies according to the major and minor subjects pursued by the student.

Major Subject

Before the beginning of the third year the student chooses a department in which he will do his major work. After he chooses his major subject, some member of the department (appointed by the head of the department) will become the student's adviser in the selection of courses. The adviser may designate a minor subject if he deems it necessary.

The minimum requirements for a major in one department are fourteen semester hours, and the maximum hours permitted to count toward a degree are thirty-five semester hours.

Farm Practice

Students without farm experience do not, as a rule, secure full benefit from any of the agricultural courses. A committee has been appointed for the purpose of assisting all students coming to the college without farm training to obtain a fair knowledge of actual farm practice. Some time during the year the committee will examine all members of the freshman class to determine whether or not their experience satisfies the farm practice requirements. Those not able to pass this examination will be required to spend at least three months on a farm designated or approved by the committee. If the student has had no experience whatsoever before entering college, he may be required to spend six to nine months on a farm. The committee reserves the right also to call on all students so placed for written reports showing the experience gained while on these farms.

Fellowships

A limited number of graduate fellowships which carry remuneration of $500 to $1,000 yearly are available to graduate students. Students who hold these fellowships spend a portion of their time assisting in classes and laboratories. The rest of the time is used for original investigation or assigned study. (See Graduate School.)

CURRICULA IN AGRICULTURE

All students registered in the College of Agriculture take the same work in the freshman and sophomore years, except those who expect to specialize in bacteriology, botany, landscape gardening, floriculture, and entomology.

At the end of the sophomore year they may elect to specialize along the lines in which they are particularly interested.

	Semester I	Semester II
Freshman Year		
Gen'l Chem. and Qual. Analysis (Chem. 1)	4	4
*General Zoology (Zool. 1)	4	—
*General Botany (Bot. 1)	—	4
Composition and Rhetoric (Eng. 1)	3	3
General Animal Husbandry (A. H. 1)	3	—
Principles of Vegetable Culture (Hort. 11)	—	3
Public Speaking (P. S. 1 and 2)	1	1
Basic R. O. T. C. (M. I. 1)	1	1
Sophomore Year		
‡Elements of Organic Chemistry (Chem. 12)	4	—
‡Agricultural Chemical Analysis		3
Geology (Geol. 1)	3	—
Principles of Soil Management (Soils 1)	—	3
Elementary Pomology (Hort. 1)	3	—
Field Crop Production (Agron. 1-2)	3	3
Feeds and Feeding (A. H. 2)	3	—
Farm Dairying (D. H. 1)	—	3
Basic R. O. T. C. (M. I. 2)	2	2
†Elective		3

AGRICULTURAL EDUCATION

The objectives of the curriculum in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural educational service.

(For special requirements and curriculum see page 105, College of Education.)

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* Offered each semester.

† Students should elect Principles of Economics (Econ. 3 A s), or Poultry (P. H. 101 s), or General Entomology (Ent. 1 s), or General Bacteriology (Bact. 1 s).

‡ Students specializing in Agricultural Economics will substitute for chemistry the following courses:

General Economics (Econ. 3 A s)	—	3
Agricultural Industry and Resources (A. E. 1f)	3	—

AGRONOMY

In the Department of Agronomy are grouped the courses in farm crops, soils, and plant breeding.

The curriculum in farm crops aims to give the student the fundamental principles of crop production. Special attempt is made to adapt the work to the young man who wishes to apply scientific principles of field crop culture and improvement on the farm. At the same time enough freedom is given the student in the way of electives so that he can register for subjects which might go along with the growing of crops on his particular farm. A student graduating from the course in agronomy should be well fitted for general farming, investigational work in the State or Federal Experiment Stations, or county agent work.

The division of soils gives instruction in the physics, chemistry, and biology of the soil, the courses being designed to equip the future farmer with a complete knowledge of his soil and also to give adequate training to students who desire to specialize in soils. Students who are preparing to take up research or teaching are expected to take graduate work in addition to the regular undergraduate courses that are offered. The division possesses the necessary equipment and facilities for the instruction in these subjects, and in addition affords opportunities for the student to come in contact with the research at the Agricultural Experiment Station, especially in the pot culture laboratories and on the experimental fields at the station and in other parts of the State.

Graduate students will find unusual opportunities to fit themselves for teaching soils in agricultural colleges, to conduct research in experiment stations, and to carry on work with the Bureau of Soils, United States Department of Agriculture.

Crops Division

	Semester I	Semester II
Junior Year		
Genetics (Gen. 101f)	3	—
Grain and Hay Judging (Agron. 4)	1	—
Grading Farm Crops (Agron. 3)	—	2
General Bacteriology (Bact. 1)	3	—
Soil Micro-Biology (Soils 7)	—	3
Expository Writing (Eng. 5-6)	2	2
Plant Physiology (Plt. Phy. 1)	4	—
Principles of Economics (Econ. 3)	—	3
Electives	4	6

	Semester I	Semester II
Senior Year		
Crop Breeding (Agron. 103)	2	—
Advanced Genetics (Gen. 102 S.)	—	3
Agricultural Economics (A. E. 2f)	3	—
Methods of Crop and Soil Investigation (Agron. 121)	—	2
Cropping Systems and Methods (Agron. 120)	—	2
Soil Survey and Classification (Soils 5)	3	—
Farm Drainage (F. Mech. 107)	—	2
Farm Machinery (F. Mech. 101)	3	—
Farm Forestry (For. 1)	—	3
Farm Management (F. M. 2)	4	—
Seminar (Agron. 203)	1	1
Electives	1	4

Soils Division

Junior Year		
Expository Writing (Eng. 5-6)	2	2
Principles of Economics (Econ. 3)	—	3
General Bacteriology (Bact. 1)	3	—
Soil Micro-Biology (Soils 7)	—	3
Fertilizers and Manures (Soils 2)	3	—
Soil Fertility (Soils 3)	—	3
Plant Physiology (Plt. Phy. 1)	4	—
Cropping Systems and Methods (Agron. 120)	—	2
Electives	5	4
Senior Year		
Agricultural Economics (A. E. 2f)	3	—
Farm Management (F. M. 2)	4	—
Methods of Crop and Soil Investigation (Agron. 121)	—	2
Soil Surveying and Classification (Soils 5)	3	—
Soil Technology (Soils 101)	3	3
Farm Drainage (F. Mech. 107)	—	2
Seminar (Agron. 203)	1	1
Electives	3	8

ANIMAL HUSBANDRY

The courses in animal husbandry have been developed with the idea of teaching the essential principles underlying the breeding, feeding, development, and management of livestock, together with the economics of the livestock industry.

The curriculum in animal husbandry is so planned as to allow plenty of latitude in the selection of courses outside of the department, thus giving the student a broad, fundamental training and fitting him to become the owner or superintendent of general or specialized livestock farms.

Opportunity for specialization is offered to those who may desire to become instructors or investigators in the field of animal husbandry.

Some livestock are maintained at the university. In addition, there are available, for use in instruction, the herds of livestock owned by the Federal Bureau of Animal Industry at Beltsville, Maryland. Through the courtesy of Maryland breeders, some private herds are also available for inspection and instruction.

Junior Year	*Semester* I	II
Expository Writing (Eng. 5-6)	2	2
General Bacteriology (Bact. 1-2)	3	3
Principles of Economics (Econ. 3 A.)	—	3
Principles of Breeding (A. H. 3)	—	3
*Swine Production (A. H. 4)	—	3
Anatomy Physiology (V. M. 1)	3	—
Genetics (Gen. 101f.)	3	—
Electives	6	3
Senior Year		
Agricultural Economics (A. E. 1)	3	—
*Sheep Production (A. H. 7)	—	3
Farm Machinery (F. Mech. 101)	3	—
Animal Hygiene (V. M. 102)	—	3
Meat and Meat Products (A. H. 8)	2	—
Farm Drainage (F. Mech. 107)	—	2
Physiological Chemistry (Chem. 119)	4	—
Seminar (A. H. 112)	1	1
Electives	4	7

BACTERIOLOGY

The present organization of this department was brought about with two main purposes in view. The first is to give all the students of the university an opportunity to obtain a general knowledge of the subject. This is of prime importance, as bacteriology is a basic subject and is of as much fundamental importance as physics or chemistry. The second purpose, and the one for which this curriculum was designed, is to fit students for positions along bacteriological lines. This includes dairy bacteriologists and inspectors; soils bacteriologists; federal, state, and municipal bacteriologists for public health positions; research positions; commercial positions; etc. At present, the demand for individuals qualified for this work in much greater than the supply. This condition is likely to exist for some time.

*Courses taken by both juniors and seniors in alternate years.

Sophomore Year	*Semester* I	II
Elements of Organic Chemistry (Chem. 12)	4	—
Agricultural Chemical Analysis (Chem. 13)	—	3
*Physics (Phys. 3) or Principles of Economics (Econ. 3A)	—	3
General Bacteriology (Bact. 1 and 2)	3	3
R. O. T. C. (M. I. 102)	2	2
Electives	8	6
Junior Year		
Dairy Bacteriology (Bact. 101)	3	3
Expository Writing (Eng. 5 and 6)	2	2
Advanced Bacteriology (Bact. 102)	—	3
Electives	12	9
Senior Year		
Advanced Bacteriology (Bact. 102)	3	3
Physiological Chemistry (Chem. 104)	4	—
Genetics (Gen. 101f)	3	—
Agricultural Statistics (Agron. 122)	2	—
Hematology (Bact. 103)	—	2
Seminar (Bact. 110)	1	1
Electives	4	11

BOTANY

The courses listed for the curriculum in botany make a kind of skeleton of essentials to which the student adds the individual requirements to make a complete four-year course. No electives are permitted in the freshman year, but thereafter the leeway increases to the senior year, where half of the courses are elected or selected to fit the individual needs of the student. This leeway is thought to be important because all students do not have the same ends in view. They may wish to prepare to be teachers, investigators in state or government experiment stations, inspectors in the field, or for any other vocations which botanists follow. The curriculum as outlined lays the foundation for graduate work leading to higher degrees.

Freshman Year	*Semester* I	II
General Chemistry and Qualitative Analysis (Chem. 1)	4	4
General Botany (Bot. 1-2)	4	4
Composition and Rhetoric (Eng. 1)	3	3
Public Speaking (P. S. 1-2)	1	1
Modern Language (French or German)	3	3
Basic R. O. T. C. (M. I. 1)	1	1
	16	16

* Only those students who are excused from Physics will take Economics.

Sophomore Year	*Semester* I	II
Organic Chemistry (Chem. 10)	4	—
Expository Writing (Eng. 5-6)	2	2
Mathematics (Math. 1-2)	3	3
Zoology (Zool. 1)	—	4
Modern Language	3	3
Mycology (Bot. 4)	2	—
Systematic Botany (Bot. 3)	—	2
Basic R. O. T. C. (M. I. 2)	2	2
Elective	1	1
	17	17

Junior Year		
Physics (Phys. 1)	4	4
Plant Pathology (Plt. Path. 1)	3	—
Plant Physiology (Plt. Phy. 1)	4	—
Plant Ecology (Plt. Phy. 2)	—	3
Genetics (Gen. 101f)	3	—
Elective	3	10
	17	17

Senior Year

Group A—

(The Morphology group)

†Plant Anatomy (Bot. 101)	3	—
†Methods in Plant Histology (Bot. 102)	—	3
General Bacteriology (Bact. 1-2)	3	3
Advanced Mycology (Bot. 104)	3	—
Advanced Taxonomy (Bot. 103)	—	3
Elective	8	8
	17	17

Group B—

(The Physiology group)

Advanced Plant Physiology (Plt. Phy. 101)	2	2
†Plant Anatomy (Bot. 101)	3	—
General Bacteriology (Bact. 1-2)	3	3
Elective	9	12
	17	17

† Courses taken by both juniors and seniors in alternate years.

Group C—

(The Pathology group)

	Semester I	II
Disease of Fruits (Plt. Path. 101)	4	—
Diseases of Garden and Field (Plt. Path. 102)	—	4
†Plant Anatomy (Bot. 101)	3	—
†Methods in Plant Histology (Bot. 102)	—	3
Pathogenic Fungi (Plt. Path. 109)	3	—
†Advanced Taxonomy (Bot. 103)	—	3
*General Bacteriology (Bact. 1 and 2)	3	3
Elective	4	4
	17	17

DAIRY AND ANIMAL HUSBANDRY GROUP

Dairy Husbandry

The Department of Dairy Husbandry offers courses in two major lines; namely, dairy production and dairy manufacture. The curriculum in each of these lines is so arranged as to give to the student an intimate knowledge of the science and facility in the art of dairy husbandry practice. The dairy production option is so organized as to meet the specific requirements of students who are especially interested in the care, feeding, breeding, management, and improvement of dairy cattle and in the production and sale of market milk.

The option in Dairy Manufactures is planned to meet the particular demands of students who are especially interested in the processing and distribution of milk, in dairy plant operation, and in the manufacture and sale of butter, cheese, ice-cream, and other milk products.

The dairy herd and the dairy manufacture and plant laboratories are available to students for instruction and for research. Excellent opportunity is, therefore, afforded to both advanced undergraduate and graduate students for original investigation and research. Graduates in the courses in dairy husbandry should be well qualified to become managers of dairy farms, teachers, investigators in the State and Federal Agricultural Experiment Stations, or to enter the field of commercial dairying.

DAIRY HUSBANDRY

Dairy Manufacture

Junior Year	*Semester* I	II
Expository Writing (Eng. 5-6)	2	2
Principles of Economics (Econ. 3)	—	3
General Bacteriology (Bact. 1)	3	—
Accounting (Econ. 120)	3	3

† Courses taken by both juniors and seniors in alternate years.
*If possible Bacteriology will be taken in Junior year.

	Semester I	Semester II
Dairy Chemistry (Chem. 121)	—	4
Dairy Manufacturing (D. H. 4) or	3	3
Market Milk (D. H. 5)	4	—
Electives	2	2
Senior Year		
Agricultural Economics (A. E. 1)	3	—
Market Milk (D. H. 5) or	4	—
Dairy Manufacturing (D. H. 4)	3	3
Dairy Bacteriology (Bact. 101)	3	—
Dairy Plant Technique (D. H. 7)	—	2
Marketing of Farm Products (A. E. 102)	—	3
Co-operation in Agriculture (A. E. 103)	3	—
Seminar	1	1
Electives	—	7

Dairy Production

Junior Year.		
Expository Writing (Eng. 5-6)	2	2
Principles of Economics (Econ. 3)	—	3
General Bacteriology (Bact. 1)	3	—
Dairy Production (D. H. 2)	3	—
Principles of Breeding (A. H. 3)	—	3
Advanced Dairy Cattle Judging (D. H. 3)	—	1
Genetics (Gen. 101f)	3	—
Farm Drainage (F. Mech. 107)	—	2
Electives	6	6
Senior Year		
Agricultural Economics (A. E. 1)	3	—
Market Milk (D. H. 5)	4	—
Dairy Bacteriology (Bact. 101)	3	—
Animal Hygiene (V. M. 101)	—	3
Seminar (D. H. 102)	1	1
Electives	6	12

ENTOMOLOGY

This department is concerned with the teaching of entomology to all agricultural students as a basis for future work in pest control, in the preparation of technically trained entomologists, and in furnishing certain courses to students in Arts and Sciences and Education.

The success of the farmer and particularly the fruit grower is in a large measure dependent upon his knowledge of the methods of preventing or combating the pests that menace his crops each year. Successful methods of control are emphasized in the economic courses.

There is an ever-increasing demand for trained entomologists. The fact that the entomological work of the Experiment Station, the Extension

Service, the College of Agriculture, and the office of the State Entomologist are in one administrative unit, enables the student in this department to avail himself of the many advantages accruing therefrom. Advanced students have special advantages in that they may be assigned to work on station projects already under way.

	Semester I	Semester II
Freshman Year		
General Chemistry and Qualitative Analysis (Chem. 1)	4	4
General Zoology (Zool. 1)	4	—
General Botany (Bot. 1)	—	4
Introductory Entomology (Ent. 1)	—	3
Composition and Rhetoric (Eng. 1)	3	3
French (1) or German (1)	3	3
Basic R. O. T. C. (M. I. 1)	1	1
Sophomore Year		
Physics (Phys. 1)	4	4
Elements of Organic Chemistry (Chem. 12)	4	—
Agricultural Chemical Analysis (Chem. 13)	—	3
Expository Writing (Eng. 5-6)	2	2
French (2) or German (2)	3	3
Intermediate Entomology (Ent. 2y)	3	3
Basic R. O. T. C. (M. I. 2)	2	2
Junior Year		
Economic Entomology (Ent. 101)	3	3
*Economic Entomology (Ent. 102)	2	2
Economic Zoology (Zool. 4)	—	1
General Bacteriology (Bact. 1-2)	3	3
Electives	10	9
Senior Year		
*Insect Pests—Special Groups (Ent. 104)	4	4
Special Problems (Ent. 4y)	2	2
Seminar (Ent. 103)	1	1
Electives	8	8

Electives in Botany, particularly Plant Physiology and Plant Pathology, are urged as especially desirable for most students specializing in entomology.

FARM MANAGEMENT AND AGRICULTURAL ECONOMICS

In this department are grouped courses in farm management and agricultural economics.

Farm management has been defined as the business of the individual farmer to organize his business so as to produce the greatest continuous

*Courses taken by both juniors and seniors in alternate years.

profit. This can be done, however, only when the organization is in accordance with the broader principles of agricultural economics. It requires not only knowledge of many factors involved in the production of crops and animals, but also administrative ability to co-ordinate them into the most efficient farm organization. Farming is a business, and as such demands for its successful conduct the use of business methods. As a prerequisite to the technical farm management course there is offered a course in farm accounting. This course is not elaborate, but is designed to meet the need for a simple yet accurate system of farm business records.

The aim of the farm management course is to assist the student to perceive the just relationship of the several factors of production and disposition as applicable to local conditions, and to develop in him executive and administrative capacity.

Agricultural economics considers the fundamental principles underlying production, distribution, and consumption, more especially as they bear upon agricultural conditions. Land, labor, and capital are considered in their relationship to agriculture.

The farmer's work does not end with the production of crops or animal products. More and more it is evident that economical distribution is as important a factor in farming as is economical production.

Students well trained in farm management and agricultural economics are in demand for county agent work, farm bureau work, experiment station or United States Government investigation, and college or secondary school teaching.

	Semester I	Semester II
Junior Year		
Agricultural Economics (A. E. 1)	3	—
Marketing of Farm Products (A. E. 102)	—	3
Farm Accounting (F. M. 1)	—	3
Business Law (Econ. 107)	3	3
Grading Farm Crops (Agron. 3)	—	2
Business Organization (Econ. 105)	3	—
Agricultural Statistics (Agron. 122-123)	2	2
Expository Writing (Eng. 5-6)	2	2
Electives	4	2
Senior Year		
Co-operation in Agriculture (A. E. 103)	3	—
Transportation of Farm Products (A. E. 101)	—	3
Seminar (A. E. 105)	1–3	1–3
Farm Management (F. M. 2)	4	—
Farm Machinery (F. Mech. 101)	3	—
Agricultural Finance (A. E. 104)	—	3
Rural Sociology and Educational Leadership (Ed. 122)	—	3
Public Finance (Econ. 104)	—	3
Electives	4–6	1–3

FARM MECHANICS

The Department of Farm Mechanics is organized to offer students of agriculture training in those branches of agriculture which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery, farm buildings, and farm drainage.

The modern tendency in farming is to replace hand labor, requiring the use of many men, by large machines, which do the work of many men yet require only one man for their operation. In many cases horses are being replaced by tractors to supply the motive force for these machines. Trucks, automobiles, and stationary engines are found on almost every farm. It is highly advisable that the student of any branch of agriculture have a working knowledge of the construction and adjustments of these machines.

About one-sixth of the total value of farms is invested in the buildings. The study of the design of the various buildings, from the standpoint of convenience, economy, and appearance, is, therefore, important.

The study of drainage includes the principles of tile drainage, the laying out and construction of tile drain systems, the use of open ditches, and a study of the Maryland drainage laws.

GENERAL AGRICULTURE

Those who do not care to specialize in any particular phase of agriculture will pursue the following curriculum:

	Semester I	Semester II
Junior Year		
Diseases of Plants (Plt. Path. 1)	3	—
Plant Physiology (Plt. Phy. 1)	4	—
General Bacteriology (Bact. 1)	3	—
Expository Writing (Eng. 5-6)	2	2
Poultry (P. 101)	—	3
Genetics (Gen. 101)	3	—
Farm Accounting (F. M. 1)	—	3
Principles of Breeding (A. H. 3)	—	3
Principles of Economics (Econ. 3)	—	3
Electives	2	3
Senior Year		
Agricultural Economics (A. E. 2f)	3	—
Farm Management (F. M. 2)	4	—
Farm Machinery (F. Mech. 101)	3	—
Gas Engines, Tractor and Automobiles (F. Mech. 102)	—	4
Cropping Systems and Methods (Agron. 120)	—	2
Farm Drainage (F. Mech. 107)	—	2
Farm Forestry (Forestry 1)	—	3
Electives	7	5

GENETICS AND STATISTICS

Rapid accumulation of knowledge in the field of genetics has revolutionized the viewpoint of those interested in plant and animal breeding and in eugenics.

Teachers and investigators have increasing occasion to interpret statistical data presented by others, as well as to gather and organize original material.

The Department of Genetics and Statistics is organized to offer students training in (1) the principles of heredity and genetics, and (2) the tools and methods employed in statistical description and induction.

HORTICULTURE

There are several reasons why the State of Maryland should be preeminent in the different lines of horticulture and offer such excellent opportunities for horticultural enterprises. A few of the more evident ones are the wide variation in soil and climate from the Eastern Shore to the mountainous counties of Allegheny and Garrett in the west, the nearness to all of the large Eastern markets, and the large number of railroads, interurban lines, and waterways, all of which combine to make marketing easy and comparatively cheap.

The Department of Horticulture offers four major lines of work; namely, Pomology, olericulture, floriculture, and landscape gardening. Students wishing to specialize in horticulture can arrange to take a general course during the four years, or enough work is offered in each division to allow students to specialize during the last two years in any of the four divisions. The courses have been planned to cover such subject matter that upon their completion students should be fitted to engage in commercial work, or county agent work, or for teaching and investigational work in the State and Federal institutions.

The department has at its disposal about twenty acres of ground devoted to vegetable gardening, eighteen acres of orchards, small fruits and vineyards, and twelve greenhouses, in which flowers and forcing crops are grown. Members of the teaching staff are likewise members of the experiment station staff, and thus students have an opportunity to become acquainted with the research which the department is carrying on. Excellent opportunity for investigating new problems is afforded to advanced undergraduates and to graduate students.

Students who intend to specialize in pomology or olericulture are required to take the same subjects which other agricultural students take during the first two years. Students who specialize in floriculture or landscape gardening, however, will take slightly different curricula. It is felt that such students require certain special courses, which it is unnecessary to require of all agricultural students. The curricula follow:

Pomology

	Semester I	Semester II
Junior Year		
Principles of Economics (Econ. 3)	—	3
Systematic Pomology (Hort. 2)	3	—
Small Fruit Culture (Hort. 4)	—	2
Fruit and Vegetable Judging (Hort. 5)	2	—
Expository Writing (Eng. 5-6)	2	2
Plant Physiology (Plt. Phy. 1)	4	—
General Floriculture (Hort. 21)	—	2
Diseases of Plants (Plt. Path. 1)	3	—
General Entomology (Ent. 1)	—	3
Genetics (Gen. 101f)	3	—
Electives	—	5
Senior Year		
Commercial Fruit Growing (Hort. 101)	3	—
Economic Fruits of the World (Hort. 102)	2	—
Horticultural Seminar (Hort. 43)	1	1
General Landscape Gardening (Hort. 31)	—	2
Farm Management (F. M. 2)	4	—
Horticultural Breeding Practice (Hort. 41)	—	1
Horticultural Research and Thesis (Hort. 42)	2	2
Electives	5	10

Olericulture

Junior Year		
Principles of Economics (Econ. 3)	—	3
Small Fruit Culture (Hort. 4)	—	2
Diseases of Plants (Plt. Path. 1)	3	—
Genetics (Gen. 101)	3	—
Expository Writing (Eng. 5-6)	2	2
General Floriculture (Hort. 21)	—	2
Plant Physiology (Plt. Phy. 1)	4	—
Fruit and Vegetable Judging (Hort. 5)	2	—
Truck Crop Production (Hort. 12)	3	—
Vegetable Forcing (Hort. 13)	—	3
General Entomology (Ent. 1)	—	3
Electives	—	2
Senior Year		
Farm Management (F. M. 2)	4	—
General Landscape Gardening (Hort. 31)	—	2
Horticultural Breeding Practice (Hort. 41)	—	1
Tuber and Root Crops (Hort. 103)	2	—
Systematic Olericulture (Hort. 105)	3	—

	Semester I	Semester II
Advanced Truck Crop Production (Hort. 104)	—	2
Horticultural Research and Thesis (Hort. 42)	2	2
Horticultural Seminar (Hort. 43)	1	1
Electives	5	8

Floriculture

Sophomore Year		
Elements of Organic Chemistry (Chem. 12)	4	—
Agricultural Chemical Analysis (Chem. 13)	—	3
Plant Physiology (Plt. Phy. 1)	4	—
Geology (Geo. 1)	3	—
Principles of Soil Management (Soils 1)	—	3
General Landscape Gardening (Hort. 31)	—	2
Elementary Pomology (Hort. 1)	3	—
Basic R. O. T. C. (M. I. 102)	2	2
Electives	1	7
Junior Year		
*Greenhouse Management (Hort. 22)	3	3
Floricultural Practice (Hort. 23)	2	2
Floricultural Trip (Hort. 27)	—	1
*Greenhouse Construction (Hort. 24)	—	2
*Garden Flowers (Hort. 26)	3	—
Expository Writing (Eng. 5-6)	2	2
Principles of Economics (Econ. 3)	—	3
Diseases of Plants (Plt. Path. 1)	3	—
Systematic Botany (Bot. 3)	—	2
Elements of Landscape Design (Hort. 33)	3	—
Electives	1	2
Senior Year		
*Commercial Floriculture (Hort. 25)	3	3
Plant Materials (Hort. 106)	2	3
Vegetable Forcing (Hort. 13)	—	3
Agricultural Economics (A. E. 2f)	3	—
Horticultural Breeding and Practice (Hort. 41)	—	1
Horticultural Seminar (Hort. 43)	1	1
Horticultural Research and Thesis (Hort. 42)	2	2
Diseases of Ornamentals (Plt. Path. 105)	2	—
Electives	4	4

Landscape Gardening

Freshman Year		
Gen. Chem. and Qual. Anal. (Inorg. Chem. 1)	4	4
General Zoology (Zool. 1)	4	—

*Courses taken by both juniors and seniors in alternate years.

	Semester I	Semester II
General Botany (Bot. 1)	—	4
Composition and Rhetoric (Eng. 1)	3	3
Public Speaking (P. S. 1-2)	1	1
Algebra (Math. 1); Trigonometry (Math. 1)	3	3
Basic R. O. T. C. (M. I. 101)	1	1
Sophomore Year		
French or German	3	3
Plant Physiology (Plt. Phy. 1)	4	—
Geology (Geol. 1)	3	—
Principles of Soil Management (Soils 1)	—	3
Plane Surveying (Sur. 1-2)	1	2
*General Landscape Gardening (Hort. 31)	—	2
Expository Writing (Eng. 5-6)	2	2
Engineering Drafting (Dr. 1)	1	1
Basic R. O. T. C. (M. I. 102)	2	2
Electives	1	2
Junior Year		
Elementary Pomology (Hort. 1)	3	—
†Plant Materials (Hort. 106)	2	3
†History of Landscape Gardening (Hort. 35)	1	—
*Elements of Landscape Design (Hort. 32)	3	—
†Landscape Design (Hort. 33)	—	3
†Garden Flowers (Hort. 26)	3	—
Principles of Economics (Econ. 3)	—	4
Diseases of Plants (Plt. Path. 1)	3	—
Systematic Botany (Bot. 2)	—	2
Farm Drainage (F. Mech. 107)	—	2
Electives	2	3
Senior Year		
†Landscape Design (Hort. 34)	3	—
†Landscape Construction and Maintenance (Hort. 36)	1	—
†Civic Art (Hort. 37)	—	2
Horticultural Research and Thesis (Hort. 42)	2	2
Horticultural Seminar (Hort. 43)	1	1
Electives	10	12

POULTRY HUSBANDRY

The course in Poultry Husbandry is designed to give the student a broad view of the practices of poultry raising. Those students who expect to develop into teachers, extension workers, or investigators should choose as electives such subjects as psychology, economic history, sociology, philosophy, political science and kindred subjects.

*Courses taken by both sophomores and juniors in alternate years.
†Courses taken by both juniors and seniors in alternate years.

	Semester	
Junior Year	*I*	*II*
Poultry Production (Poultry 103)	—	4
Expository Writing (Eng. 5 and 6)	2	2
General Bacteriology (Bact. 1-2)	3	3
Genetics (Gen. 101f)	3	—
Poultry Keeping (Poultry 102)	4	—
Principles of Economics (Econ. 3)	—	3
Electives	5	5
Senior Year		
Agricultural Economics (A. E. 2f)	3	—
Farm Management (F. M. 2)	4	—
Farm Accounting (F. M. 1)	—	4
Animal Hygiene (Bact. 108)	—	3
Poultry Breeds (Poultry 104)	4	—
Poultry Management (Poultry 105)	—	4
Marketing Farm Products (A. E. 2)	—	3
Electives	6	2

SPECIAL STUDENTS IN AGRICULTURE

Mature students who have fulfilled the regular college entrance requirements and are not candidates for degrees may, on consent of the dean, register as special students and pursue a program of studies not included in any regular curriculum, but arranged to meet the needs of each individual. All university fees for these special students are the same as fees for regular students.

There are many young farmers who desire to take short intensive courses in their special lines of work during slack times on the farm. Arrangements have been made to permit such persons to register at the office of the Dean of the College of Agriculture and receive a card granting them permission to visit classes and work in the laboratories of the different departments. This opportunity is created to aid florists, poultrymen, fruitgrowers, gardeners, or other especially interested persons who are able to get away from their work at some time during the year.

The regular charges are *$5.00 for registration and $1.00 per week for the time of attendance.

*One registration is good for any amount of regular or intermittent attendance during a period of four years.

TWO-YEAR COURSE IN FARMING

In response to many requests for such work, the College of Agriculture has organized a two-year Course in Farming.

This course is for students who have not the time or the preparation to enter any of the four-year courses in the College, but who desire to make farming their business in life and wish to bring to that business such a working knowledge of its underlying principles and practice as will aid them in making it a success.

Textbooks, lectures, and laboratory work are used to inculcate basic scientific principles. Well directed observations in field and forest, orchard and garden, barn and poultry yard, and actual hand work in them all demonstrate to the student the practical application of science on the farm, and familiarize him with the best practices in modern agriculture.

The two-year course is subcollegiate, and does not lead to a degree. No part of its work will be given collegiate credit.

Following is a synopsis of the course:

Two-Year Course In Farming

	Classes per Week Semester	
First Year	*I*	*II*
Farm Chemistry	4	4
Soils and Fertilizers	7	—
Breeds of Livestock / Judging Livestock	7	—
Farm Arithmetic	3	—
Public Speaking	1	1
Fruit Growing	—	5
Vegetable Gardening	—	5
Feeding Animals	—	4
Farm Observation	—	1
Second Year		
Farm Machinery	3	—
Farm Dairying	6	—
Crop Production / Grain Judging	6	—
Poultry	3	—
Farm Accounting	3	—
Farm Management	—	5
Marketing	—	3
Cement Work	—	1
Farm Woodwork	—	1
Gas Engines	—	4
Farm Forestry	—	3

AGRICULTURAL EXPERIMENT STATION

HARRY J. PATTERSON, *Director*

The agricultural work of the University naturally comprises three fields: research, instruction, and extension. The Agricultural Experiment Station is the research agency of the University, which has for its purpose the increase of knowledge relating to agriculture, primarily for the direct benefit of the farmer. It is also the real source of agricultural information for use in the classroom and for demonstrations in the field.

The Experiment Station work is supported by both State and Federal appropriations. The Hatch Act, passed by Congress in 1887, appropriates $15,000 annually; the Adams Act, passed in 1906, provides an additional $15,000 annually, and the Purnell Act, passed in 1925, provides $20,000 for the next fiscal year and an increase of $10,000 each year until the amount reach $60,000 annually.

The objects, purposes, and work of the Experiment Stations as set forth by these acts are as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The Purnell Act also permits the appropriation to be used for conducting investigations and making experiments bearing on the manufacture, preparation, use, distribution, and marketing of agricultural products, and for such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life.

The Maryland Station, in addition to the work conducted at the University, operates a sub-station farm of fifty acres at Ridgely, Caroline County, and a farm of about sixty acres at Upper Marlboro for tobacco investigations. Experiments in co-operation with farmers are conducted at many

different points in the State. These tests consist of studies with soils, fertilizers, crops, orchards, insect and plant disease control, and stock feeding.

The results of the Experiment Station work during the past quarter of a century have developed a science of agriculture to teach, and have laid a broad and substantial foundation for agricultural development. The placing of agricultural demonstrations and extension work on a national basis has been the direct outgrowth of the work of the Experiment Stations.

The students taking courses in agriculture are kept in close touch with the investigations in progress.

EXTENSION SERVICE

T. B. SYMONS, *Director*

The Extension Service is that branch of the University of Maryland, established by Federal and State law, which is designed to assist the farmer and his family in promoting the prosperity and welfare of agriculture and rural life. Its work is conducted in co-operation with the United States Department of Agriculture.

The Extension Service is represented in each county of the State by a county agent and in all but a few counties by a home demonstration agent. Through these agents and its staff of specialists, the Extension Service comes into intimate contact with rural people and with the problems of the farm and home.

Practically every phase of agriculture and rural home life comes within the scope of the work undertaken by the Extension Service. Farmers are supplied with details of crop and livestock production, and with instructions for controlling disease and insect pests; they are encouraged and aided in organized effort, helped with marketing problems, and in every way possible assisted in improving economic conditions on the farm.

Rural women are likewise assisted in the problems of the home. They are made acquainted with time and labor-saving devices, with simpler and easier methods of work, with new knowledge of foods, with new ideas about home furnishing, with practical methods of home sewing and millinery construction, and with such other information as tends to make rural home life attractive and satisfying.

For rural boys and girls, the Extension Service provides a valuable type of instruction in agriculture and home economics through its 4-H Club work. The instruction is incident to actual demonstrations conducted by the boys and girls themselves. These demonstrations, under supervision of the county and home demonstration agents, are the best possible means of imparting to youthful minds valuable information in crop and livestock production and in the household arts. The 4-H Club work, moreover, affords rural boys and girls a very real opportunity to develop the qualities of self-confidence, perseverance, and leadership.

The Extension Service works in accord with all other branches of the University of Maryland and with all agencies of the United States Department of Agriculture. It co-operates with all farm and community organizations in the State which have as their major object the improvement of agriculture and rural life; and it aids in every way possible in making effective the regulatory work and other measures instituted by the State Board of Agriculture.

COLLEGE OF ARTS AND SCIENCES

T. H. TALIAFERRO, *Acting Dean*

The College of Arts and Sciences provides four years of liberal training in biological sciences, economics and business administration, history, languages and literature, mathematics, philosophy, physical sciences, political science, psychology, and sociology. It thus affords the student an opportunity to acquire a general education which shall serve as a foundation for success in whatever profession or vocation he may choose. It particularly prepares the ground and lays the foundation for the learned professions of law, medicine, theology, teaching, and even the more technical professions of engineering, public health service, and business administration. Through the aid which it furnishes other colleges of the University it aims to give students of these colleges the broad outlook necessary for liberal culture and for public service.

This College is an outgrowth of the Division of Language and Literature of Maryland State College, and later of the School of Liberal Arts of the University. In 1921 the School of Liberal Arts and the School of Chemistry were combined, and other physical and biological sciences were brought into the newly formed College of Arts and Sciences, and thus it was made a thoroughly standardized Arts and Science College. In 1922-1923 the scope and program of the various groups and departments of the College were extensively reorganized in order to broaden and amplify the courses of instruction offered.

Requirements for Admission

The requirements for admission to the College of Arts and Sciences are in general the same as those for admission to the other colleges and schools of the University. See Section I, "Entrance."

For admission to the pre-medical and pre-dental curricula two years of any one foreign language in addition to the regularly prescribed units are required. A detailed statement of the requirements for admission to the School of Medicine and the relation of these to the pre-medical curriculum will be found under the School of Medicine.

Departments

There are eleven university departments under the administrative control of the College of Arts and Sciences: Classical Languages, Chemistry, Economics and Sociology, English, History and Political Science, Mathematics, Modern Languages, Philosophy and Ethics, Physics, Public Speaking, and Zoology and Aquiculture. In addition to these, there are other departments, which, although they are under the control of other colleges of the University, furnish instruction for the College of Arts and Sciences: Bacteriology, Botany, Entomology, Geology, Military Science, Physical Edu-

cation, and Psychology. Students in this college are also permitted to elect certain courses in the Colleges of Agriculture, Education, Engineering, and Home Economics.

Degrees

The degrees conferred upon students who have met the prescribed conditions for degrees in the College of Arts and Sciences are Bachelor of Arts and Bachelor of Science.

The baccalaureate degree from the College of Arts and Sciences may be conferred upon a student who has satisfied all entrance requirements and has secured credit for a minimum of 127 credit hours, including six hours of military science for all able-bodied men students and six hours of physical education for all women students and such male students as are excused from military science, and one hour of library science for all students except those taking the special curricula in chemistry and the combined courses in which there are other requirements. Students who have received eight credits for military science or physical education are required to complete 129 credit hours for graduation.

Graduates of this college who have completed the regular course are awarded the degree of Bachelor of Arts, except that, upon request, any student who has met the requirements for that degree may be awarded the degree of Bachelor of Science, provided the major portion of his work has been done in the field of science and his application has the approval of the department in science in which his major work has been carried. Students who have elected the combined program of Arts and Medicine may be granted the degree of Bachelor of Arts or Bachelor of Science after the completion of at least three years of the work of this college and the first year of the School of Medicine. Those electing the combined five-year Academic and Nursing Course are awarded the degree of Bachelor of Science upon the completion of the full course. Those taking the combined course in Arts and Law will be awarded the Bachelor of Arts degree after the completion of three years of the work of this college and one year of full-time law courses, or its equivalent, in the School of Law. This last combined program will be in full effect after September, 1927, by which time the School of Law will require two years of pre-law courses for admission.

The last thirty hours of Arts courses in all the combined programs must be completed in residence at College Park. Likewise, the last thirty hours of the regular course leading to a degree must be taken in College Park.

Normal Load

The normal load for the Freshman year is sixteen hours a week for the first semester, including one hour of library science and one hour of military science or physical education, and seventeen hours for the second semester. The Sophomore load is seventeen hours per semester, two hours of which are military science or physical education.

The normal load for the Junior and Senior years is fifteen hours.

Absolute Maximum

Students whose average grade for the preceding year is a B average or above may, with the approval of the Dean, be permitted to take additional hours for credit; *but in no case shall the absolute maximum of 19 hours per week be exceeded.* In the majority of cases it is better for the student to put in four full years in meeting the requirements for a degree than to try to cover the course in a shorter period by taking additional hours.

Freshman-Sophomore Requirements

(a) Before the beginning of the Junior year the student not taking a special curriculum must have completed sixty credit hours in basic subjects and at least four or five of these hours must be taken from each of six of the eight groups described below under major and minor requirements.

(b) Not more than twenty of these hours may be taken in one department.

(c) Freshmen and sophomores may not carry more than twelve hours in one group at a time.

Freshman Program	*Semester I*	*Semester II*
Composition and Rhetoric (Eng. 1 y)	3	3
*Foreign Language	3	5–3
Science (Biological or Physical)	4	4
Reading and Speaking (P. S. 1 y)	1	1
R. O. T. C. (M. I. 1 y) or Physical Education 1 y	1	1
Library Methods (C. S. 1 f)	1	—
Freshman Lectures	—	—
Elect one of the following :		
**Elementary Social Sciences (Soc. Sci. 1 y) 3		
***Mathematics (Math. 1 f-2 s) 3		
Modern European History (Hist. 1 y) 3	3	3
English Literature (Eng. 2 y) 3		
	—	—
Total hours	16	17

Sophomore Year

The curriculum of the Sophomore year has been arranged on the basis of a wider election of courses than has heretofore prevailed, but the selection of these courses must be strictly within the limits set forth above under Freshman-Sophomore requirements.

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* Three hours throughout year only when entered in second year of language.
** Advisable for the advanced courses in Economics, Government, and Sociology.
*** Prerequisite to Physics and necessary for students pursuing advanced courses in Chemistry.

Major and Minor Requirements

For the purpose of choosing major and minor fields of study, the courses of instruction open to students in the College are divided into eight groups. During this academic year minors only may be carried in Groups II and VII.

GROUPS

I.	Biological Sciences	Botany Zoology Bacteriology Entomology
II.	Classical Languages and Literatures	Latin Greek
III.	English Language and Literature	English Language English Literature Public Speaking
IV.	History and Social Sciences	Economics History Political Science Sociology
V.	Mathematics	Pure Mathematics Applied Mathematics Astronomy
VI.	Modern Languages and Literatures	French German Spanish
VII.	Philosophy, Psychology, and Education	
VIII.	Physical Sciences	Chemistry Geology Physics

(a) A major shall consist of not less than 20 and not more than 40 hours in a university department, and of not less than 30 and not more than 60 in the group including the major department.

(b) A minor shall consist of not less than 20 and of not more than 30 credit hours in a group related to the major group, not more than 25 of which shall be in any one department. Any hours taken in excess of this maximum in the minor group will not count as credit hours toward a degree. The minor must have the favorable recommendation of the head of the major department.

(c) At the beginning of the Junior year each student (except those following prescribed curricula) must select a major in one of the groups and before graduation must complete one major and one minor. In certain exceptional cases two minors may be allowed, but in no case will any hours above the maximum of 30 in either minor be counted for credit toward a degree.

(d) The courses constituting a major must be chosen under the supervision of the faculty of the department in which the major work is done, and must include a substantial number of courses not open to freshmen and sophomores.

Specific Requirements for Graduation

Before graduation the following specific requirements must be completed by all students except those pursuing prescribed curricula.

A. Military Science or Physical Education 1y-2y, six hours.

B. Library Science 1f, one hour.

C. Group Requirements:

I. *English*—The required course in Composition and Rhetoric and two hours of Public Speaking. In addition at least a one-semester course must be taken in some form of advanced composition or in literature.

II. *Foreign Languages and Literature*—If a student enters the University with but two units of language or less, he must pursue the study of foreign language for two years. If three or more units of foreign language are offered for entrance he must continue the study of foreign language for one year. Students who offer two units of a foreign language for entrance, but whose preparation is not adequate for the second year of that language, receive only half credit for the first year's course.

III. *History and the Social Sciences*—At least nine hours of history, economics, political science, or sociology, which shall include at least a one-semester course in history other than State history.

IV. *Mathematics and Natural Sciences*—A minimum requirement of eight hours of laboratory science with a minimum of eleven hours in this group.

V. *Education, Philosophy, and Psychology*—Six hours, with at least one course in Philosophy or Psychology.

Completion of Specific Requirements

It is strongly recommended that students complete as much of the above specific prescribed work by the end of the Sophomore year as can be taken without interfering with the general Freshman-Sophomore requirements. All of the specific requirements for graduation must be met before a student may be admitted to full senior standing.

Junior-Senior Requirements

The work in the Junior and Senior years is elective within the limits set by the Major and Minor requirements and the completion of the specific requirements as outlined above.

Students With Advanced Standing

Students entering the Junior year of the College of Arts and Sciences with advanced standing from other universities or from other colleges of this university will be required to meet the requirements respecting studies of the first two years only to the extent of their deficiencies in credits in Arts and Science subjects for full junior standing. Scholarship requirements as outlined in Section I of this catalogue will apply to all courses offered for advanced standing.

Electives in Other Colleges and Schools

A limited number of courses may be counted for credit in the College of Arts and Sciences for work done in other colleges of the University.

The number of semester hours accepted from the various colleges is as follows.

College of Agriculture—Fifteen.
College of Education—Twenty.
College of Engineering—Fifteen.
College of Home Economics—Twenty.
School of Law—Thirty in combined program.
School of Medicine—Thirty in combined program.
School of Nursing—Two years in combined program.

Student Responsibility

The individual student will be held responsible for the selection of the courses and the major in conformity with the preceding regulations.

Advisers

Each new student may be assigned to a member of the faculty as his personal adviser, who will assist him in the selection of his courses, the arrangement of his schedule, and any other matters on which he may need assistance or advice. The faculty adviser acts in this capacity as assistant and representative of the Dean, who is charged with the execution of all of the foregoing rules and regulations.

SPECIAL CURRICULA

Special curricula are provided in Chemistry and Business Administration, and for the Pre-Medical, Pre-Dental, and Pre-Law courses. They are also provided for the combined programs in Arts and Nursing and Arts and Law.

CHEMISTRY

The Department of Chemistry includes the divisions of Inorganic, Organic, Analytical, Agricultural, Industrial, and Physical Chemistry, together with the State Control Work.

Courses in these several branches of the science are arranged with a view to the following:

(1) Contributing toward the liberal education of the arts student;

(2) Laying the scientific foundation necessary for the professions of medicine, dentistry, pharmacy, engineering, agriculture, etc.;

(3) Offering training for the pursuit of chemistry as a career.

It should be noted that the chemical curricula hereinafter outlined are designed primarily to insure adequate instruction in the fundamentals of the science. At the same time it has been considered desirable to preserve as high a degree of flexibility as possible in order to afford the student who has a definite end in view an opportunity to fit his course to his actual needs. In general it may be said that the curricula offered prepare students to enter the following fields:

1. *Industrial Chemistry*—Curriculum II furnishes basic training, which, in conjunction with subsequent industrial experience or graduate work, should prepare the student to undertake plant control, plant management, or plant development work.

2. *Food and Agricultural Chemistry*—Curriculum III may be adjusted, through the intelligent selection of electives, to fit the student for work in agricultural experiment stations, soil bureaus, geological surveys, food laboratories, industries engaged in the processing or handling of food products, and in the fertilizer industry.

3. *Chemical Education*—Through co-operation with the College of Education, Curriculum I may be supplemented with the work in education necessary to obtain a State high-school teacher's certificate. To prepare for college teaching, graduate work leading to a higher degree is necessary.

4. *Chemical Research*—Preparation for research in chemistry is also based upon Curricula I, II, and III. It is advisable that elections be made largely from courses in chemistry and the allied sciences. Graduate work is essential (See Graduate School).

5. *State Control Laboratory*—The State Control Laboratory is authorized to enforce the State Regulatory Statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland. The specific laws involved are the Feed Stuff

Law of Maryland, in effect June 1, 1920; the Fertilizer Law of Maryland, in effect June 1, 1922; and the Lime Inspection Law of Maryland, in effect June 1, 1912.

CHEMISTRY CURRICULA

The following curricula are given to aid students in the choice of subjects.

I. GENERAL CHEMISTRY

	Semester I	Semester II
Freshman Year		
Composition and Rhetoric (Eng. 1y)	3	3
Modern Language (French or German)	3	3
Mathematics (Math 1 f 2 s)	3	3
General Chemistry (Chem. 1y)	4	4
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Basic R. O. T. C. (M. I. 1y)	1	1
Freshman Lectures	—	—
	17	17
Sophomore Year		
Qualitative Analysis (Chem. 2y)	4	4
Physics (Phys. 1y)	4	4
Mathematics (Math 5 f 6 s)	3	3
Zoology (Zool. 1 f)	4	—
Botany (Bot. 1 s)	—	4
Basic R. O. T. C. (M. I. 2y)	2	2
Reading and Speaking (P. S. 1y)	1	1
	18	18
Junior Year		
Quantitative Analysis (Chem. 6y)	5	5
Chemical Calculation (Chem. 3y)	1	1
Physics Problems (Phys. 4y)	1	1
Organic Chemistry (Chem. 8y)	4	4
Electives (Arts and Sciences or Education)	6	6
	17	17
Senior Year		
Advanced Cocposition & Rhetoric (Eng. 3 f-4 s)	2	2
Physical Chemistry (Chem. 102 f-103 s)	4	4
Chemical Seminar	1	1
Chemical Electives	4	4
Electives (Arts and Sciences or Education)	6	6
	17	17

Co-operative Program in Chemistry

Arrangements have been made with certain industries so that students of high average ability, by utilizing their summers, may take a four-year course leading to a B. S. in chemistry, and at the same time earn sufficient money to meet a large part of their expenses during the last two years. This plan is made possible by the following proportionment of time:

PROPORTIONMENT OF A STUDENT'S FOUR-YEAR COLLEGE CAREER

	First Year 1st Sem.	First Year 2nd Sem.	First Summer		Second Year 1st Sem.	Second Year 2nd Sem.	Second Summer
Time	Sept. 15 to Feb. 1	Feb. 1 to June 15	June 15 to Aug. 15	Aug. 15 to Sept. 15	Sept. 15 to Feb. 1	Feb. 1 to June 15	June 15 to Sept. 15
Occupation	Study	Study	Study	Vacation	Study	Study	Work
Credit Hours	18	18	10		18	18	

	Third Year 1st Sem.	Third Year 2nd Sem.	Third Summer		Fourth Year 1st Sem.	Fourth Year 2nd Sem.
Time	Sept. 15 to Feb. 1	Feb. 1 to June 15	June 15 to Sept.1	Sept.1 to Sept. 15	Sept. 15 to Feb. 1	Feb. 1 to June 15
Occupation	Study	Work	Study	Vacation	Work	Study
Credit Hours	18		10			18

It will be noted that the credit hours total 127, which fulfills the standard requirement in the Arts and Sciences College, and that this is done without taking more than 19 hours in any one semester except in the Curriculum in Industrial Chemistry, which corresponds in hours to the Engineering curricula.

Since the co-operation with the industries does not begin until the second year, most of the student's work in departments other than the chemistry department has been completed. On the other hand, if these subordinate courses have not been finished, no difficulty arises, for all shifts come at the usual break in the scholastic year (June 15th or Feb. 1st). It may be further noted that while a junior is studying, a senior is working, and vice-versa. In this way the job is manned continuously, and each student gets one year of practical experience during his last two years in college.

Some advantages which the plan offers to the student are the following:

1. Utilizes summers along lines which are in tune with the student's life work;
2. Gives him an outlook upon a practical field while studying, and helps him to see the need of acquiring chemical knowledge;
3. Brings him in contact with the practical men of the country, and hence helps him to get a vision of the practical side of the science;
4. Acts as a vocational guide; i. e., the student knows at the end of four years whether or not he wishes to be a chemist;
5. Assures usually a position at the end of four years, for he has had a chance to show his worth to some one who needs a man;
6. Assures the earning of sufficient money to pay in part his expenses during the last two years in college.

Each of the curricula in Chemistry may be worked on this plan.

GENERAL CHEMISTRY

Co-operative Plan

	Semester I	Semester II
Freshman Year		
Composition and Rhetoric (Eng. 1y)	3	3
Modern Language (French or German)	3	3
Mathematics (1 f-2 s)	3	3
General Chemistry (Chem. 1y.)	4	4
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Basic R. O. T. C. (M. I. 1y)	1	1
Freshman Lectures	—	—
	17	17
First Summer		
Qualitative Analysis (Chem. 2y)	8	
Quantitative Analysis (Chem. 6 Y)	2	
	10	
Sophomore Year		
Quantitative Analysis (Chem. 6y)	4	4
Chemical Calculations (Chem. 3y)	1	1
Physics (Phys. 1y)	4	4
Mathematics (Math. 5 f-6 s)	3	3
Zoology (Zool. 1 f)	4	—
Botany (Bot. 1 s)	—	4
Basic R. O. T. C. (M. I. 2y)	2	2
	18	18

	Semester I	Semester II
Second Summer—INDUSTRIAL LABORATORY ASSIGNMENT		
Junior Year		
Organic Chemistry (Chem. 8y)	4	*—
Bacteriology (Bact. 1 f)	3	—
Physics Problems (Phys. 4y)	1	—
Psychology (Psych. 1 f)	3	—
Quantitative Analysis (Chem. 7)	4	—
Electives	3	—
	18	

**Junior Year—Second Semester*—INDUSTRIAL LABORATORY ASSIGNMENT.

Third Summer		
Advanced Composition and Rhetoric (Eng. 3 f)	2	—
Industrial or Physiological Chemistry (Chem. 110 f or 104 f)	4	—
Physical Chemistry (Chem. 102 f)	4	—
	10	
Second Semester		
Physical Chemistry (Chem. 103 s)	*—	4
Electives in Chemistry	—	4
Organic Chemistry (Chem. 8y)	—	4
Economics (Econ. 3 s)	—	3
Advanced Composition and Rhetoric (Eng. 4 s)	—	2
Physics Problems (Phys. 4y)	—	1
		18

**Senior Year—First Semester*—INDUSTRIAL LABORATORY ASSIGNMENTS.

II. INDUSTRIAL CHEMISTRY

Co-operative Plan

Freshman Year		
Composition and Rhetoric (Eng. 1y)	3	3
Modern Language (German or French)	3	3
Reading andSpeaking (P. S. 1y)	1	1
Mathematics (Math. 3 f 4 s)	5	5
General Chemistry (Chem. 1y)	4	4
Engineering Drafting (Dr. 1y)	1	1
Shop and Forge Practice (Shop 1y)	1	1
Basic R. O. T. C. (M. I. 1y)	1	1
Freshman Lectures	—	—
	19	19

	Semester I	Semester II
First Summer		
Qualitative Analysis (Chem. 2y)	8	—
Quantitative Analysis (Chem. 6y)—1st part	2	—
	10	
Sophomore Year		
Quantitative Analysis (Continuation of Chem. 6y)	4	4
Organic Chemistry (Chem. 8y)	4	4
Mathematics (Math. 7y)	5	5
Physics (Phys. 2y)	5	5
Descriptive Geometry (Dr. 2y)	2	2
Basic R. O. T. C. (M. I. 2y)	2	2
	22	22
Second Summer—INDUSTRIAL LABORATORY ASSIGNMENT.		
Junior Year		
Engineering Mechanics (Mech. 1y) (1st half)	4	*—
Physics (Phys. 103 f)	3	—
Gas Analysis (Chem. 112 f)	4	—
Economics (Econ. 3 E f)	3	—
Electives in Chemistry	5	—
Engineering Jurisprudence (Engr. 101 f)	1	—
	20	
**Second Semester*—INDUSTRIAL LABORATORY ASSIGNMENT.		
Third Summer		
Physical Chemistry (Chem. 102 f)	4	—
Industrial Chemistry (Chem. 110 f)	3	—
Unit Processes of Chemical Engineering (Chem. 113)	3	—
	10	
Second Semester		
Engineering Mechanics (Mech. 1y) (2nd. half)	*—	4
Physics (Phys. 104 s)	—	2
Thermodynamics (Chem. 114 s)	—	3
Elements of Machine Design (M. E. 102 s)	—	3
Physical Chemistry (Chem. 103 s)	—	4
Industrial Chemistry (Chem. 110y) (2nd. half)	—	3
		19

**Second Year—First Semester*—INDUSTRIAL LABORATORY ASSIGNMENT.

III. AGRICULTURAL CHEMISTRY

	Semester I	Semester II
Freshman Year		
Composition and Rhetoric (Eng. 1y)	3	3
Modern Language (French or German)	3	3
Mathematics (Math. 1 f-2 s)	3	3
General Chemistry (Chem. 1y)	4	4
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Basic R. O. T. C. (M. I. 1y)	1	1
Freshman Lectures	—	—
	17	17
Sophomore Year		
Physics (Phys. 1y)	4	4
Mathematics (Math. 5 f-6 s)	3	3
Qualitative Analysis (Chem. 2 y)	4	4
General Zoology (Zool. 1 f)	4	—
Botany (Bot. 1 s)	—	4
Basic R. O. T. C. (M. I. 2y)	2	2
Reading and Speaking (P. S. 1y)	1	1
	18	18
Junior Year		
Organic Chemistry (Chem. 8y)	4	4
Quantitative Analysis (Chem. 6y)	5	5
Advanced English Composition (Eng. 3 f-4 s)	2	2
Physics Problems (Phys. 4 y)	1	1
Plant Physiology (Plt. Phy. 1 f)	4	—
Animal Physiology	—	4
	16	16
Senior Year		
Physical Chemistry (Chem. 114 f-115 s)	4	4
Physiological Chemistry (Chem. 104 f)	4	—
Chemistry of Nutrition (Chem. 109 s)	—	4
Economics (Econ. 3 f)	3	—
Bacteriology (Bact. 1 s)	—	3
Organic Analysis (Chem. 105 f)	4	—
Special Problems (Chem. 220 s)	—	4
	15	15

AGRICULTURAL CHEMISTRY

Co-operative Plan

Freshman Year	Semester I	Semester II
Composition and Rhetoric (Eng. 1y)	3	3
Modern Language (French or German)	3	3
Mathematics (Math. 1 f-2 s)	3	3
General Chemistry (Chem. 1y)	4	4
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Basic R. O. T. C. (M. I. 1y)	1	1
	17	17
First Summer		
Qualitative Analysis (Chem. 2y)	8	
Quantitative Analysis (Chem. 3 f)	2	
	10	
Sophomore Year		
Physics (Phys. 1y)	4	4
Mathematics (Math. 5 f-6 s)	3	3
Organic Chemistry (Chem. 2y)	4	4
Quantitative Analysis (Chem. 2y)	4	4
Advanced English Composition (Eng. 3 f-4 s)	2	2
Basic R. O. T. C. (M. I. 2y)	2	2
	19	19

Second Summer—PLANT LABORATORY ASSIGNMENT.

Junior Year—First Semester		
Zoology (Zool. 1 f)	4	*—
Plant Physiology (Plt. Phy. 1 f)	4	—
Economics (Econ. 3 f)	3	—
Bacteriology (Bact. 1 f)	3	—
Organic Analysis (Chem. 105 f)	4	—
	18	

**Junior Year—Second Semester*—PLANT LABORATORY ASSIGNMENT.

Third Summer		
Physical Chemistry (Chem. 102 f)	4	—
Physiological Chemistry (Chem. 104 f)	4	—
Psychology (Psych. 1 f)	3	—
	11	

Senior Year—Second Semester	Semester I	Semester II
Physical Chemistry (Chem. 103 s)	*—	4
Chemistry of Foods and Nutrition (Chem. 109 S)	—	4
Animal Physiology	—	4
Special Problems in Chemistry (Chem. 220 f)	—	4
		—
		16

**Senior Year—First Semester*—PLANT LABORATORY ASSIGNMENT.

BUSINESS ADMINISTRATION

The aim of this curriculum is to afford those who propose to enter business as a career a training in the general principles of business. The work is based on the view that through a study of the best business methods there may be obtained valuable mental discipline and at the same time a knowledge of business technique that will make for a successful business career. Business demands today particularly men who are broadly trained and not men narrowly drilled in routine. Hence, two years of liberal college training are very desirable for students intending to enter a business career. The curriculum provides for this broad cultural background as well as the special training in business subjects.

Freshman Year	Semester I	Semester II
Composition and Rhetoric (Eng. 1y)	3	3
Foreign Language (German, French, or Spanish)	3	3
Science (Chemistry, Zoology, or Botany)	4	4
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Mathematics (Math. 1 f-2 s)	3	3
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1
Library Methods (L. S. 1 f)	1	--
Freshmen Lectures	—	--
	18	17
Sophomore Year		
American History (History 3y)	3	3
History of World Commerce (Econ. 1 f)	3	—
Economic Geography (Econ. 2 s)	—	3
Principles of Economics (Econ. 3 f)	3	—
Economic Problems (Econ. 4 s)	—	3
Business English (Eng. 17 f-18 s)	2	2
Elements of Psychology (Psych 1 s)	—	3
Reading & Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2
*Electives	3	--
	17	17

	Semester I	Semester II
Junior Year		
General Accountancy (Econ. 109y)	3	3
Business Organization & Operation (Econ. 105 f)	3	—
Corporation Finance (Econ. 106 s)	—	3
Business Law (Econ. 107 f-108 s)	3	3
Money & Credit (Econ. 101 f)	2	—
Banking (Econ. 102 s)	—	2
Mathematical Theory of Investment (Math. 101 f)	3	—
Elements of Statistics (Math. 102 s)	—	3
*Electives	2	2
	16	16
Senior Year.		
Investments (Econ. 103 f)	3	—
Life Insurance (Econ. 112 s) or Property Insurance (Econ. 113 s)	—	2
Foreign Trade (Econ. 115 s)	—	3
Marketing Organization & Administration (Econ. 116 f-117 s)	3	3
Labor Problems (Soc. 102 f)	2	—
*Electives	7	7
	15	15

THE PRE-MEDICAL CURRICULUM

The minimum requirement for admission to the School of Medicine of the University of Maryland is 60 semester hours of prescribed courses, exclusive of military drill or physical education. The subjects and hours prescribed by the Council on Medical Education of the American Medical Association are covered in the first two years of the Pre-Medical Curriculum. In view of the fact, however, that about five times as many students apply for admission to the School of Medicine of the University as can be accommodated, most of whom have a baccalaureate degree, students are strongly urged to complete the full three-year curriculum before making application for entrance to the School of Medicine.

Preference will be given students entering the School of Medicine of the University who present the credits obtained by the successful completion of the three-year curriculum or its equivalent of 97 semester hours. To meet the recommendation of the Pre-Medical Committee a student must complete the curriculum with an average grade of "C" or above, and must otherwise satisfy the Committee that he is qualified by character and scholarship to enter the medical profession.

Another advantage the three-year curriculum offers over the minimum requirements of 60 hours is that the students successfully completing this

* Electives must first be chosen to fulfill the Specific Requirements for Graduation; then from approved courses in the College of Arts and Sciences, Engineering, Education, or Agriculture.

program are awarded the degree of Bachelor of Arts or Bachelor of Science, on the recommendation of the Dean of the School of Medicine, after the completion of the first year's work in the Medical School. This combined program of seven years leads to the degree of Doctor of Medicine upon the completion of the full course. The first three years are taken in residence at College Park, and the last four at Baltimore in the School of Medicine. At least one year of residence at College Park is necessary for students who transfer from other colleges and universities who are to become candidates for the combined degrees. Only in exceptional cases will students who have been less than two years in residence at College Park be recommended for preference in admission to the School of Medicine.

For requirements for admission see Section I, "Entrance."

PRE-MEDICAL CURRICULUM

	Semester I	Semester II
Freshman Year		
Composition and Rhetoric (Eng. 1y)	3	3
Mathematics (Math. 1 f-2 s)	3	3
General Zoology (Zool. 2y)	4	4
General Chemistry (Chem. 1y)	4	4
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 1y)	1	1
Library Science (Lib. Sci. 1 f)	1	—
Freshman Lectures	—	—
	—	—
	17	16
Sophomore Year		
Physics (Phys. 1y)	4	4
Organic Chemistry (Chem. 8y)	4	4
Modern Language (French or German)	3	3
Zoology (Zool. 5 s)	4	—
Psychology (Psych. 1 s)	—	3
Extempore Speaking (P. S. 8 s)	—	1
Basic R. O. T. C. (M. I. 2y)	2	2
	—	—
	17	17
Junior Year		
*Elementary Social Sciences (Soc. Sci. 1y)	2	2
Advanced Composition and Rhetoric (Eng. 3 f-4 s)	2	2
Physical Chemistry (Chem. 10y)	3	3
Physiological Chemistry (Chem. 104 f.)	4	—
Embrylogy (Zool. 101 s)	—	4
Electives	4	4
	—	—
	15	15

* See page 172 regarding credit.

Senior Year.

The curriculum of the first year of the School of Medicine. The students also may elect the fourth year's work from advanced courses offered in the College of Arts and Sciences.

PRE-DENTAL CURRICULUM

Students taking one year of work in the College of Arts and Sciences may be admitted to the second year of the five-year course of the School of Dentistry, providing the following program of studies has been followed:

Freshman Year	*Semester* I	*Semester* II
Composition and Rhetoric (Eng. 1y)	3	3
Zoology (Zool. 2y)	4	4
Mathematics (Math 1 f-2 s)	3	3
Chemistry (Chem. 1y)	4	4
Reading and Speaking (P. S. 1y)	1	1
Library Methods (L. S. 1 f)	1	—
Basic R. O. T. C. (M. I. 1y) or Physical Education (P. Ed. 1y)	1	1
Freshmen Lectures	—	—
	—	—
	17	16

If a second year of pre-dental education is completed in the College of Arts and Sciences, it should include the following courses: Physics 1y and Organic Chemistry (Chem. 8y). The balance of the program will be made up of approved electives.

FIVE-YEAR COMBINED ARTS AND NURSING CURRICULUM

The first two years of this course are taken in the College of Arts and Sciences at College Park. If students enter this combined program with advanced standing at least the second full year of the course must be completed in College Park.

The remaining three years are taken in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, Baltimore. The degree of Bachelor of Science and the Diploma in Nursing are granted at the end of the five-year course. Full details regarding this course may be found in the section of the catalogue dealing with the School of Nursing.

Two-Year Program in the College of Arts and Sciences

Freshman Year	*Semester* I	*Semester* II
Composition and Rhetoric (Eng. 1y)	3	3
Foreign Language	3	3
General Chemistry (Chem. 1 y)	4	4
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Elementary Foods (H. E. 1y)	3	3
Physical Education (Phys. Ed. 1y)	1	1
Freshmen Lectures	—	—
	—	—
	17	17

Sophomore Year	*Semester* I	*Semester* II
English Literature or History	3	3
Organic and Food Chemistry (Special Course)	3	—
Nutrition (Special Course)	—	3
Principles of Economics (Econ. 3 f)	3	—
Elements of Psychology (Psych. 1 s)	—	3
Gen. Zoology (Zool. 1f)	4	—
Reading and Speaking (P. S. 1y)	1	1
Physical Education (Phys. Ed. 2y)	2	2
Electives	1	5
	—	—
	17	17

COMBINED PROGRAM IN ARTS AND LAW

Since September, 1927, the Law School of the University has required two years of academic credit for admission to the school, or sixty-seven semester hours of college credit.

The University offers a combined program in Arts and Law, leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students pursuing this combined program in college and pre-legal subjects will spend the first three years in the College of Arts and Sciences at College Park. During this period they will complete the prescribed curriculum in pre-legal studies as outlined below, and must complete the Specific Requirements for graduation as indicated above. If students enter the combined program with advanced standing, at least the third full year's work must be completed in residence at College Park.

Upon the successful completion of one year of full-time law courses in the School of Law in Baltimore, the degree of Bachelor of Arts will be awarded. The degree of Bachelor of Laws will be awarded upon the completion of the combined program.

Freshman Year	*Semester* I	*Semester* II
Composition & Rhetoric (Eng. 1y)	3	3
Science or Mathematics	4–3	4–3
Modern European History (Hist. 1y)	3	3
Elementary Social Sciences (Soc. Sci. 1y)	3	3
Latin or Modern Language	4–3	4–3
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y)	1	1
Freshmen Lectures	—	—
	—	—
	18	18

Sophomore Year	*Semester* I	II
Expository Writing (Eng. 5 f-6 s)	2	2
Principles of Economics (Econ. 3 f)	3	—
Economic Problems (Econ. 4 s)	—	3
American History (History 3y)	3	3
U. S. Government (Pol. Sci. 2 f)	3	—
Elements of Psychology (Psy. 1 s)	—	3
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 2y)	2	2
*Electives	3	3
	17	17

Junior Year

Largely electives, including the completion of the Specific Requirements for Graduation as outlined on page 81.

Senior Year

First Year of Regular Law Course

Students who are unable to take the combined program in Arts and Law may fulfill the entrance requirements of the Law School by completing the first two years of pre-legal studies as outlined in the above combined course.

MISCELLANEOUS

LIBRARY SCIENCE

A course in Library Methods is required of all students registered in the College of Arts and Sciences.

This course is intended to help students use the library with greater facility. Instruction will be given by practical work with the various catalogues, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much used reference books, which the student will find helpful throughout his college course.

MUSIC

The Department of Music serves students of the University of two general classes: those who make a specialty of the subject with a view to becoming musical artists or music teachers, and those who pursue musical studies for purposes of enjoyment and general culture. For the former group extensive

* Electives should be in English, History, Latin or Modern Languages, Economics or Political Science, or a part of the Specific Requirements for Graduation.

private instruction is provided, with attention to technical development along particular lines; while as large provision as possible is made for all, in the various club activities and public lectures and recitals.

For courses in music see Section III, Courses of Instruction.

Voice

Courses in voice culture are offered, covering a thorough and comprehensive study of tone production, based on the Italian method of singing.

The work required to develop a singer is begun with the most fundamental principles of correct breathing. Scale and arpeggio exercises, and all intervals, the portamento, legato, and staccato, and trill, and othem embellishments to develop the technique of singing are studied through the medium of vocal exercises arranged by the greatest authorities on the voice, under the careful supervision of the instructor.

The study of songs and ballads is adapted to the ability and requirements of each singer, a thorough training being given in diction and phrasing, through the medium of sacred and secular ballads, leading to the oratorio and opera.

Opportunities are afforded all voice pupils who are capable to make public appearances in the regular pupils' recitals, as well as in the churches of the community.

Tuition

One lesson per week, term of eighteen weeks, $24.

The above price for lessons in voice is offered to students of the University who are pursuing regular academic courses. Terms for private instruction outside the University may be secured from the instructor in voice.

Piano

Elementary piano courses. Work for beginners, based on the Leschetizky method.

Advanced piano courses. The college work in piano presupposes three years of preparatory study of the piano, part or all of which may be taken at the University.

Lessons are taken twice a week. A four-year college course is as follows:

First Year—Technical studies based on the modern weight and rotary method: Heller Etudes, Sonatas of Haydn, Mozart, and Beethoven; selections from classic and modern composers.

Second Year—Bach Preludes; concertos by classic masters; Jensen Etudes; selections from classic, romantic, and modern composers.

Third Year—Leschetizky technic; Chopin Preludes and Waltzes; Bach Inventions; Mendelssohn Concertos; Beethoven Sonatas; selections from romantic and modern composers.

Fourth Year—Leschetizky technic; Chopin Etudes; Bach Well-Tempered Clavichord; sonatas and concertos by Greig, McDowell, Schutt, Beethoven, etc.; concert pieces by modern and romantic composers.

Tuition

One lesson per week, term of eighteen weeks, $24.

Note.—Music tuitions are due in advance. Ten per cent. is added to all tuitions not paid in advance.

COLLEGE OF EDUCATION

WILLARD S. SMALL, *Dean.*

The College of Education was established in 1920. It was organized to meet the needs of the following classes of students: (1) undergraduate students preparing to teach the cultural and the vocational studies in the high schools; (2) advanced students preparing to become high school principals, elementary school principals, educational supervisors, and school administrators; (3) those preparing for educational work in the trades and industries; (4) county agents, home demonstrators, boys and girls club leaders and other extension workers; (5) students majoring in other lines who desire courses in education for their informational and cultural values.

The Summer School, although organically distinct from the College of Education, is administered by the Dean of the College of Education, and is in effect an administrative division of the College.

Departments

The instructional work of the College of Education is conducted by five functional divisions or departments: History and Principles of Education, Methods in Academic and Scientific subjects, Agricultural Education, Home Economics Education, and Industrial Education.

Requirements for Admission

The requirements for admission to the College of Education are in general the same as for the other colleges of the University. See Section I, "Entrance."

For additional requirements for admission to the curricula in Agricultural Education and Home Economics Education, see page 105 and page 106, respectively.

Degrees

The degrees conferred upon students who have met the conditions prescribed for a degree in the College of Education are: Bachelor of Arts; Bachelor of Science. Upon completion of 128 credits in conformity with the requirements specified under "curricula" and in conformity with general requirements of the University, the appropriate degree will be conferred.

Teachers' Special Diploma

The degrees granted for work done in the College of Education indicate primarily the quantity of work completed. The Teachers' Special Diploma certifies to the professional character of such work. Teachers' special diplomas will be granted only to those who, besides qualifying for a degree,

give promise of superior professional ability as evidenced by their personality, character, experience, and success in supervised teaching.

Teachers' special diplomas are granted in the Biological Sciences, Chemistry, English, French, General High School Science, History and Social Science, Mathematics and Physics; Vocational Agriculture, Vocational Home Economics, and Industrial Education.

The recipient of the teachers' special diploma is eligible for certification by the State Superintendent of Schools without examination.

Facilities

In addition to the general facilities offered by the University, certain important supplementary facilities are available.

Supervised Teaching. Actual experience in teaching under competent supervision is of basic importance in the preparation of teachers. Since 1920 a co-operative arrangement with the Prince George's County School authorities has been in effect whereby students preparing to teach get this experience in the Hyattsville High School under instructors employed and paid jointly by the County School Board and the University.

Observation. The observation work necessary for efficient teacher training is conducted in Washington and in nearby Maryland schools.

The nearness of these schools and of the federal offices and libraries in Washington dealing with education provides unusual opportunities for contact with actual classroom situations and current administrative problems in education.

Curricula

The departments of the College of Education fall into two main groups: General Education and Vocational Education. Two types of curricula are offered corresponding with these two major groupings.

General Education. The first of these is designed to prepare teachers of the academic and scientific subjects in high schools. The basic requirements are fixed and definite, but the student may select from a number of subjects the major and minor subjects in which he expects to qualify for teaching. The student may qualify for the degree either of Bachelor of Arts or of Bachelor of Science, depending upon his election of major subject.

The requirements for majors and minors correspond in general with the requirements of the College of Arts and Sciences, but are modified in some respects to adapt them better to the needs of prospective teachers and to satisfy the regulations of the State Department of Education in regard to "the number of college credits required in any two or more subjects which are to be placed on a high school teachers' certificate."

Some of the most common combinations of academic subjects in the high schools of the State are: English and History; English and French; History and French; Mathematics and one or more of the high school Sciences.

Vocational Education. The curricula in Vocational Education are designed for the definite purpose of preparing teachers of agriculture, home economics, manual training, and industrial subjects. As the University of Maryland is the institution designated by the State Board of Education for the training of teachers of vocational agriculture, home economics, and trades and industries under the provisions of the Smith-Hughes Vocational Educational Act, the curricula in this class have been organized to meet the objectives set up in the act and in the interpretations of the Federal Board of Vocational Education and the State Board of Education. These curricula lead to the degree of Bachelor of Science.

Guidance in Registration

All students wishing to prepare for teaching should consult the Dean of the College of Education regarding possible combinations and the arrangement of their work. At the time of matriculation each student is expected to make a provisional choice of the subjects which he desires to prepare to teach and to secure the advice and approval of the heads of departments which offer these subjects.

It is advisable for students who purpose to teach to register in the College of Education, in order that they may have continuously the counsel and guidance of the faculty which is directly responsible for their professional preparation. It is permissible, however, for a student to register in that college which in conjunction with the College of Education offers the majority of the courses he will pursue in satisfying the requirements of the curriculum he elects.

The Teachers' Special Diploma will be awarded only to the student who shall have fulfilled all of the requirements of the curriculum he elects. Students in other colleges desiring to qualify for the Teachers' Special Diploma should consult with the Dean of the College of Education at the beginning of the sophomore year in order to plan satisfactorily their subsequent programs. Adjustments may be made as late as the beginning of the Junior year. *It is practically impossible to make adjustments later than that.*

Professional Requirements

As an integral part of every curriculum of the College of Education leading to a degree, a minimum of 20 credits in Education is required.

The special requirements peculiar to each curriculum in the College of Education are shown in the tabular statements of the curricula for Arts and Science Education, Agricultural Education, and Home Economics Education.

Certification of High School Teachers

The State Board of Education will certify to teach in the approved high schools of the State only such persons as have had satisfactory professional preparation.

The State Department of Education is stimulating and encouraging instruction in music and athletics in the high schools of the State. In the majority of these schools the instruction in these subjects will have to be carried on by teachers who teach other subjects as well. Training in either or both of these subjects will be valuable for prospective teachers.

ARTS AND SCIENCE EDUCATION

Students electing this curriculum may register either in the College of Education or the College of Arts and Sciences. In any case they will register with the College of Education for the teachers' special diploma.

The Teachers' Special Diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

General Requirements

In addition to Military Science or Physical Education, required of all students in the University, the following requirements must be fulfilled by all candidates for degrees in this curriculum, preferably by the end of the sophomore year:

(1) Composition and Rhetoric (Eng. 1), 6 semester hours, and in addition not less than 4 semester hours in English Language or Literature.

(2) Reading and Speaking (P. S. 1), 2 semester hours.

(3) Two years of foreign language if the student enters with less than three years of foreign language; one year, if he enters with three or more years.

(4) Nine semester hours of history and the social sciences, of which six must be history.

(5) Eleven hours of natural science or of natural science and mathematics, of which eight semester hours must be in laboratory science and must include General Zoology (Zool. 1).

	Semester	
Freshman Year	*I*	*II*
Composition and Rhetoric (Eng. 1)	3	3
Educational Guidance (Ed. 1)	1	1
Reading and Speaking (P. S. 1)	1	1
R. O. T. C. (M. I. 1), or Physical Education (Phys. Ed. 1)	1	1
Foreign Language	3	3–5
Science (Biological or Physical)	4	4
(One of the following.)		
Modern European History (Hist. 1)	3	3
Elements of Social Science (Soc. Sci. 1)	3	3
Elements of Literature (Eng. 2)	3	3
Mathematics (Math. 1)	3	3
	16	16–18

	Semester	
Sophomore Year	*I*	*II*
Public Education in the United States (Ed. 2)	2	—
Educational Hygiene (Ed. 3)	—	2
Basic R. O. T. C. (M. I. 2), or Physical Education 2	2	2
*Foreign Language	3	3
†Electives	10–11	10–11
	—	—
	17–18	17–18

Junior Year		
Educational Psychology (Ed. 101)	3	—
Technic of Teaching (Ed. 102)	—	3
†Electives	13	13
	—	—
	16	16

Senior Year		
Special Methods and Supervised Teaching (Ed. 110, 111, 112, 113, 114)	3	3
Principles of Secondary Education (Ed. 103)	—	3
†Electives	12	9
	—	—
	14	14

Special Requirements

The semester hour requirements detailed below for each of the subjects cover all of the requirements of the State Board of Education (By-law 51) in regard to the number of college credits in any two or more subjects which are to be placed on the high school teacher's certificate.

No student will be permitted to do practice teaching who has not met all previous requirements.

English. For a major in English 36 semester hours are required as follows:

Composition and Rhetoric	6 semester hours
Advanced Composition and Rhetoric	4 semester hours
Reading and Speaking	2 semester hours
Literature	18 semester hours
Electives	6 semester hours
Total	36

For a minor in English 24 semester hours are required:

Composition and Rhetoric	6 semester hours
Advanced Composition and Rhetoric	4 semester hours
Reading and Speaking	2 semester hours
Literature	12 semester hours
Total	24

* For students entering with less than three units in foreign language.
† Determined by "general requirements" and choice of major and minor subjects.

All students with a major or minor in English must complete English 1, Public Speaking 1, Advanced Composition and Rhetoric, and History of English Literature by the end of the junior year.

Additional courses required in the major group are The Drama or Shakespeare and 6 hours from the following: The Novel, English and American Essays, Modern Poets, Victorian Poets, Poetry of Romantic Age, and American Literature.

The Literature courses for the minor must be chosen from the preceding list.

History and Social Sciences. For a major in this group 30 semester hours are required as follows:

History	18 semester hours
Economics or Sociology	6 semester hours
*Electives	6 semester hours

All students with a major or minor in the Social Studies must finish Modern European History and American History by the end of the junior year.

Foreign Languages. For a major in Foreign Languages 36 semester hours are required. As French is the only foreign language for which supervised teaching is available, not less than 22 semester hours of this major must be in French; the balance may be in another foreign language. A minor requires 22 semester hours if confined to one language; 30 semester hours if two languages are included. If both major and minor are taken in foreign language the major requires 30, and the minor, 24 semester hours.

Mathematics. For a major in Mathematics 30 semester hours are required as follows:

College Algebra, Trigonometry, Analytics, and Calculus 20 semester hours

(Above to be completed by the junior year)

Differential Equations	3 semester hours
Differential Geometry	3 semester hours
Electives	4 semester hours

For a minor in Mathematics, 20 semester hours are required.

Sciences. Both majors and minors are offered in Chemistry, Physics, and the Biological Sciences. The minimum requirement for a major is 30 semester hours; for a minor, 20 semester hours. In case of a major, not less than 20 semester hours must be completed by the end of the junior year.

In satisfaction of the regulation of the State Department of Education for certification in General High School Science, a major and a minor are offered, consisting of a combination of Chemistry, Physics, and the Biological Sciences. For a major, a minimum of 34 semester hours is required, which shall include the elementary courses in Chemistry, Physics, and Biology (Zoology and Botany), and ten additional hours elected from any of the three sciences. For a minor, the requirements are 24 semester hours consisting of the elementary courses required for the major.

*For a minor, the same requirements, less electives.

AGRICULTURAL EDUCATION

The objectives of the curriculum in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural educational service.

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the agricultural education curriculum must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

The electives allowed by this curriculum may be selected from any of the courses offered by the University for which the student has the necessary prerequisites. A student is expected, however, to confine his elections to subjects relating to farming and to teaching. Though a certain amount of specialization in a particular field of agriculture such as animal husbandry, agronomy, pomology, vegetable gardening, agricultural economics, or farm management, is encouraged, students should arrange their work so that approximately forty per cent. of their time will have been spent on technical agriculture, twenty-five per cent. on scientific subjects, twenty per cent. on subjects of a general educational character, and from twelve to fifteen per cent. on subjects in professional education.

Students electing this curriculum may register either in the College of Education or in the College of Agriculture. In either case they will register with the College of Education for the teachers' special diploma. The teachers' special diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

	Semester I	Semester II
Freshman Year		
Educational Guidance (Ed. 1)	1	1
General Animal Husbandry (A. H. 1)	3	—
Principles of Vegetable Culture (Hort. 11)	—	3
General Chemistry (Chem. 1-A or 1-B)	4	4
General Botany (Bot. 1)	4	—
General Zoology (Zool. 1)	—	4
Composition and Rhetoric (Eng. 1)	3	3
Basic R. O. T. C. (M. I. 1)	1	1
Sophomore Year		
Public Education in the United States (Ed. 2)	2	—
Diseases of Plants (Plt. Path. 1)	3	—
General Entomology (Ent. 1)	—	3
Field Crop Production (Agron. 1-2)	3	3
Geology (Geol. 1)	3	—
Principles of Soil Management (Soils 1)	—	3
Feeds and Feeding (A. H. 2)	3	—
Farm Dairying (D. H. 1)	—	3
Elementary Pomology (Hort. 1)	3	—
Principles of Economics (Economics 3-A)	—	3
Basic R. O. T. C. (M. I. 2)	2	2

Junior Year	Semester I	Semester II
Educational Psychology (Ed. 101)	3	—
Survey of Teaching Methods (Ag. Ed. 100)	—	3
Public Speaking (Courses to be arranged)	2	2
Farm Machinery (F. Mech. 101)	3	—
Farm Shop (F. Mech. 104)	1	—
Poultry (Poultry 101)	—	3
Genetics (Gen. 101)	3	—
Grain and Hay Judging (Agron. 4)	1	—
Advanced Dairy Cattle Judging (D. H. 3)	—	1
Bacteriology (Bact. 1)	—	3
Agricultural Economics (A. E. 1)	3	—
Marketing Farm Products (A. E. 102)	—	3
Electives	2–13	2–13
Senior Year		
Teaching Secondary Vocational Agriculture (Ag. Ed. 101)	4	4
Educational Leadership in Rural Communities (Ag. Ed. 102)	—	3
Teaching Farm Shop in Secondary Schools (Ag. Ed. 104)	1	—
Principles of Secondary Education (Ed. 103)	—	3
Farm Management (F. M. 2)	4	—
Expository Writing (Eng. 5)	2	2
Electives	3–6	3–6

HOME ECONOMICS EDUCATION

The curriculum in Home Economics Education is designed primarily to prepare teachers of secondary vocational home economics under the terms of the Smith-Hughes Act. The curriculum includes scientific and cultural courses, the essential courses in the several subdivisions of home economics, and the professional courses concerned with the specific preparation for teaching. Whatever phase of the general field of home economics the student wishes to enter, the curriculum provides the fundamentals and also prepares her for teaching and administration in that special part of the field.

Practical experience in home making and in the commercial applications of home economics are valuable additions to the equipment of the teacher. It is advised, therefore, that the student be employed, in the summer of her junior year, in some form of commercial work. This may be in a department store, dress-making establishment, hotel, bakery, tea-room, or other business enterprise vitally related to home economics. The practice house course in the junior year supplements home training and helps to develop managerial ability.

The Teachers' Special Diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

Freshman Year	Semester I	Semester II
Composition and Rhetoric (Eng. 1)	3	3
General Chemistry (Chem. 1)	4	4
Elementary Social Sciences (Soc. Sci. 1)	3	3
Educational Guidance (Ed. 1)	1	1
General Zoology (Zool. 1)	4	—
General Botany (Bot. 1)	—	4
Physical Education (Phys. Ed. 1)	1	1
	—	—
	16	16
Sophomore Year		
Special Applications of Chemistry	4	—
*Special Applications of Physics (Phys. 3)	—	4
Elementary Foods (H. E. 31 y)	3	3
Composition and Design (H. E. 21 f)	3	—
Costume Design (H. E. 24 s)	—	3
Elementary Textiles and Clothing (H. E. 11 s)	—	3
Public Education in U. S. (Ed. 2)	2	—
Physical Education (Phys. Ed. 2)	2	2
Electives	3	2
	—	—
	17	17
Junior Year		
Educational Psychology (Ed. 101)	3	—
Technic of Teaching (Ed. 102)	—	3
Household Bacteriology (Bact. 3)	—	3
Nutrition (H. E. 131-132)	3	3
Marketing and Buying (H. E. 143)	2	—
Pattern Designing and Dressmaking (H. E. 111 f)	4	—
Education of Women	—	4
Electives	5	4
	—	—
	17	17
Senior Year		
Child Study (H. E. Ed. 102)	5	—
Management of the Home (H. E. 142 f)	5	—
Teaching Voc. Home Economics; Methods and Practice (H. E. Ed. 101)	3	3
Home Architecture and Interior Decoration (H. E. 121)	—	3
Principles of Secondary Education (Ed. 103)	—	3
Electives	3	7
	—	—
	16	16

* For students who have not had High School Physics.

INDUSTRIAL EDUCATION

Three types of curricula are offered in Industrial Education; viz., a four-year curriculum, a two-year curriculum, and a special curriculum.

Four-Year Curriculum in Industrial Education

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the four-year curriculum in industrial education must be willing to engage in the trades or industries during the three summer vacations, if they have not had an equivalent experience in industry.

The elections allowed by this curriculum may be chosen from any of the courses offered in the University for which the student has the necessary prerequisite.

Two-Year Curriculum in Industrial Education.

This curriculum is designed for mature students who have had considerable experience in some trade or industry.

Applicants for admission to this curriculum must have as a minimum requirement an elementary school education or its equivalent.

The curriculum is prescribed, but it is administered flexibly in order that it may be adjusted to the needs of students.

Special Courses for Teachers of Trades and Related Subjects.

To meet the needs for industrial teacher training in Baltimore and in other industrial centers, extension courses are offered. The work of these courses deals with the analysis and classification of trade knowledge for instructional purposes, methods of teaching, organization, administration and supervision of industrial education, observation and practice of teaching, shop and classroom management, vocational psychology, vocational guidance, and history of the development of industrial education.

A special announcement of the extension courses will be issued in September, 1928, and may be obtained from the office of the Registrar either in Baltimore or in College Park.

COLLEGE OF ENGINEERING

A. N. JOHNSON, *Dean*

Whether a man follows engineering as his life's work or enters other fields, it is well recognized that the training received in the engineering colleges of today affords a splendid preparation for many callings in public and private life outside of the engineering profession.

The College of Engineering includes the Departments of Civil, Electrical, and Mechanical Engineering. A few years ago the curricula were considerably changed, the general purpose being to broaden the courses of instruction that young men may be better prepared to enter industry or the public service. In either field there is abundant opportunity; each demands the electrical and mechanical, as well as the civil engineer. Maryland needs men to carry on her great highway work and large public undertakings, as well as to carry on her industries. Such training, therefore, seems preeminently a function of the State's University.

The subject matter of the courses is not essentially different from that usually given. In order to give the time necessary to the technical subjects, as well as to those of a more general character, courses of study are prescribed so that the time in each semester may be used to the best advantage.

The studies prescribed for freshmen and sophomores are practically the same for all branches of engineering. Among other advantages that such a plan has is the very important one that the young man will not be called upon to decide definitely the branch of engineering in which he will specialize until his junior year.

Engineering research is recognized today as one of the most needed useful contributions that the engineering college can make to the State. Work of this character is under way at the University of Maryland, where, through co-operation with the Maryland State Roads Commission and the U. S. Bureau of Public Roads, highway research problems are being studied, the solution of which will prove of utmost value to the people of the State. It is planned to develop as rapidly as possible this phase of the work, which will have, aside from its great economic value to the State, an important educational value because of the close contact the students will have with the live engineering problems of today.

Admission Requirements

The requirements for admission to the College of Engineering are, in general, the same as elsewhere describd for admission to the under-graduate departments of the University, except as to the requirements in mathematics. See Section I, "Entrance."

It is possible, however, for high school graduates having the requisite number of entrance units to enter the Engineering College without the unit

for advanced algebra, or the one-half unit for solid geometry, provided such students are prepared to devote their first summer to a summer course in analytic geometry. The program for such students would be as follows: During the first semester five hours a week would be devoted to making up advanced algebra and solid geometry; in the second semester, the mathematics of the first semester would be taken, and the second semester mathematics would be taken in the summer school. Thus, such students, if they passed successfully, would be enabled to enter the sophomore year the next fall.

Bachelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in Civil, Electrical, and Mechanical Engineering, respectively.

Master of Science in Engineering

The degree of Master of Science in Engineering is given to those students registered in the Graduate School, who hold bachelor degrees in engineering, prerequisite for which requires a similar amount of preparation and work as required for bachelor degrees in the Engineering College of the University of Maryland.

Candidates for the degree of Master of Science in Engineering are accepted in accordance with the procedure and requirements of the Graduate School, as will be found explained in the catalogue under the head of Graduate School.

Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work not less than three years.

2. His registration for a degree must be approved at least twelve months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.

3. He shall present a satisfactory thesis on an approved subject.

4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.

Equipment

The Engineering building is provided with lecture-rooms, recitation-rooms, drafting-rooms, laboratories, and shops for all phases of engineering work.

Drafting-Rooms. The drafting-rooms are equipped for practical work. Engineering students must provide themselves with an approved drawing outfit, material, and books, the cost of which during the freshman year amounts to about $40.00.

Electrical Engineering Laboratory. The equipment includes many of the various types of direct current and alternating current generators and motors, rotary converter, distribution transformers, control apparatus, and the measuring instruments essential to practical electrical testing. For experimental work, electrical power is obtained from engine driven units and a turbine generator; a storage battery is used for constant voltage-testing purposes.

Instruments are available for measuring the candle power of lamps and for the determination of illumination intensities. The standardizing laboratory apparatus includes primary and secondary standards used in calibrating laboratory instruments.

The telephone laboratory is equipped with apparatus for experimental work on magneto and common battery system. The radio apparatus is limited, at present, to receiving sets.

Mechanical Engineering Laboratory. The apparatus consists of Corliss and plain slide valve engines, steam turbine set, fans, pumps, indicators, gauges, feed water heaters, tachometers, injectors, flow meters, apparatus for determination of the B. T. U. in coal, gas, and liquid fuels, pyrometers, draft gauges, planimeters, thermometers, and other necessary apparatus and equipment for a mechanical laboratory.

Materials Laboratory. Apparatus and equipment are provided for making standard tests on various construction materials as steel, concrete, timber, and brick.

Equipment includes two 100,000-pound universal testing machines, cement-testing apparatus, extensometer and micrometer gauges, and other special devices for ascertaining the elastic properties of different materials.

Special apparatus which has been designed and made in the shops of the University is also made available for student work.

Highway Research Laboratory. Certain problems in highway research have been undertaken and are actively under way, being carried on in co-operation with the State Roads Commission and the U. S. Bureau of Public Roads.

A study of the traffic over the Maryland State Highway system has been in progress, and there has already been prepared a traffic map covering the entire state highway system.

The elastic properties of concrete have been studied in the laboratory, this work co-ordinating with the general program of research problems undertaken by the U. S. Bureau of Public Roads.

In co-operation with the State Roads Commission, there are taken every other year samples of concrete from the concrete roads of the State, these samples consisting of cores cut from the road by a special core drill apparatus mounted upon a suitably equipped truck. The cores are brought into the laboratory, where they are tested and records of the results sent to the State Roads Commission.

Machine Shops and Foundry. The machine shops and foundry are well lighted and fully equipped. Shops for wood working, metal, forge, and foundry practice are provided for engineering students.

The wood-working shop has full equipment of hand and power machinery.

The machine shops are equipped with various types of lathes, planers, milling machines, and drill presses.

The foundry is provided with an iron cupola, a brass furnace, and coke oven.

The shop equipment not only furnishes practice, drill, and instruction for students, but makes possible the complete production of special apparatus for conducting experimental and research work in engineering.

Surveying Equipment. Surveying equipment for plane, typographic, and geodetic surveying is provided properly to equip several field parties. A wide variety of types of instruments is provided, including domestic as well as foreign makes.

Special Models and Specimens. A number of models illustrating various types of highway construction and highway bridges are available for students in this branch of engineering.

There has also been collected a wide variety of specimens of the more common minerals and rocks from various sections of the country, particularly from Maryland.

Library

Each department contains a well-selected library for reference, and the standard engineering magazines.

The class work, particularly in the higher courses, requires that the students consult special books of reference and current technical literature.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are also expected to attend and take part in the meetings of the Engineering Society, Seminar, and engineering lectures.

Junior and senior students with requisite standing may elect additional hours not to exceed three hours a semester.

All members of the freshman engineering class are required to attend a series of lectures, the speakers, for the most part, being other than engineers. Each student is required to hand in a very brief written summary of each lecture.

In addition to the requirements of the regular curricula, all students in the Engineering College are required, during each of the three summer vacations, to obtain employment in some line of commercial work, preferably that which relates to engineering. Unless the student can offer some adequate reason why he has not been so employed during at least two months of each of his summer vacation periods, it may be considered sufficient cause for withholding his degree.

The proximity of the University to Baltimore and Washington, and to other places where there are great industrial enterprises, offers an excellent opportunity for engineering students to observe what is being done in this chosen field. An instructor accompanies students on all trips of inspection.

The same program is required of all students in engineering in the Freshman and Sophomore years.

	Semester	
Freshman Year	*I*	*II*
Composition and Rhetoric (Eng. 1)	3	3
*Elementary Social Sciences (Soc. Sci. 1)	3	3
*Modern Language	3	3
Oral English (P. S. 1)	1	1
Freshman Mathematics (Math. 3 f-4 s)	5	5
General Chemistry (Chem. 1)	4	4
Engineering Drafting (Dr. 1)	1	1
Shop and Forge Practice (Shop 1)	1	1
Basic R. O. T. C. (M. I. 1)	1	1
Engineering Lectures	—	—
Sophomore Year		
Oral English (P. S. 3)	1	1
*Modern Language (Adv. Course)	3	3
*Modern European History (Hist. 1 y)	3	3
Sophomore Mathematics (Math. 7 y)	5	5
Physics (Phys. 2)	5	5
Descriptive Geometry (Dr. 2)	2	2
Machine Shop Practice (Shop 2-3) M. & E.	1	2
Civil	1	—
Basic R. O. T. C. (M. I. 2)	2	2
Plane Surveying (Surv. 1-2) M. & E.	1	—
Civil	1	2
Engineering Lectures	—	—

* Alternatives.

CIVIL ENGINEERING

	Semester I	Semester II
Junior Year		
*Principles of Economics (Econ. 3 E f)	3	--
*Oral English (P. S. 4)	1	1
*Engineering Geology (Engr. 2)	1	1
*Engineering Mechanics (Mech. 2)	5	4
*Prime Movers (Engr. 1)	2	2
Design of Structures, Elements (C. E. 102 s)	—	5
*Materials of Engineering (Mech. 3 s)	—	2
Advanced Surveying (Surv. 3 f)	3	—
Railroad, Elements of (C. E. 101 f)	3	—
Engineering Lectures	—	—
*Railway Transportation (Econ. 110 s)	—	3
Senior Year		
*Oral English (P. S. 5y)	1	1
*Engineering Jurisprudence (Engr. 101)	1	—
*Public Utilities (Engr. 3)	—	1
*Engineering Chemistry (Chem. 111 f)	1	—
Sanitary Bacteriology (Bact. 4 s)	—	1
Highways, (C. E. 106 f)	4	—
Bridges, Masonry and Steel (C. E. 105)	4	4
Buildings, Masonry and Steel (C. E. 104)	4	4
Sanitation (C. E. 107)	3	3
Thesis (C. E. 108 s)	—	4
Engineering Lectures	—	—

ELECTRICAL ENGINEERING

	Semester I	Semester II
Junior Year		
*Principles of Economics (Econ. 3 E f)	3	—
*Railway Transportation (Econ. 110 s)	—	3
*Oral English (P. S. 4y)	1	1
*Engineering Geology (Engr. 2)	1	1
*Engineering Mechanics (Mech. 1)	4	3
*Materials of Engineering (Mech. 3 s)	—	2
Design-Machine Elements (M. E. 101)	1	—
Direct Currents (E. E. 102)	5	5
*Prime Movers (Engr. 1)	2	2
Design-Electric Machine (E. E. 103)	1	1
Engineering Lectures	—	—

* Required of all engineering students.

	Semester I	Semester II
Senior Year		
*Oral English (P. S. 5y)	1	1
*Engineering Jurisprudence (Engr. 101)	1	—
*Public Utilities (Engr. 3)	—	1
*Engineering Chemistry (Chem. 111y)	1	1
Alternating Currents (E. E. 104)	5	5
Design-Electric Machine (E. E. 105)	1	2
†Electric Railways and Electric Power Transmission (E. E. 106)	3	4
†Telephones and Telegraphs (E. E. 107)	3	4
†Radio Telephony and Telegraphy (E. E. 108)	3	4
†Illumination (E. E. 109)	3	4
Thermodynamics (Mech. 101)	3	—
Engineering Lectures	—	—

MECHANICAL ENGINEERING

	Semester I	Semester II
Junior Year		
*Principles of Economics (Econ. 3 E f)	3	—
Advanced Physics (Phys. 6)	—	3
*Oral English (P. S. 4y)	1	1
*Engineering Geology (Engr. 2)	1	1
*Engineering Mechanics (Mech. 1)	4	3
*Materials of Engineering (Mech. 3)	—	2
Foundry Practice (Shop 4)	1	—
*Prime Movers (Engr. 1)	2	2
Kinematics and Machine Design (M. E. 102)	6	2
Design-Steel Structures (C. E. 103)	—	2
Heating and Ventilation (M. E. 108 s)	—	2
Engineering Lectures	—	—
Senior Year		
*Oral English (P. S. 5 y)	1	1
*Engineering Jurisprudence (Engr. 101)	1	—
*Public Utilities (Engr. 3)	—	1
*Engineering Chemistry (Chem. 111 y.)	1	1
Design-Prime Movers (M. E. 103)	3	3
Design-Power Plants (M. E. 104 s)	—	3
Design-Pumping Machinery (M. E. 105 f)	2	—
Thermodynamics (Mech. 102)	3	3
Physical Chemistry (Chem. 10 y)	3	3
Engineering Finance (M. E. 106 s)	—	2
Mechanical Laboratory (M. E. 107 y)	1	1
Industrial Application of Electricity (E. E. 101)	3	—
Engineering Lectures	—	—

* Required of all engineering students.
† Select two.

COLLEGE OF HOME ECONOMICS

M. MARIE MOUNT, *Dean.*

The home economics subjects are planned to meet the needs of the following classes of students: (1) those who desire to gain a general knowledge of the facts and principles of Home Economics without specializing in any one phase of Home Economics; (2) those students who wish to teach Home Economics in schools or to become Extension Specialists in Home Economics; (3) those who are interested in certain phases of Home Economics with the intention of becoming dietitians, restaurant and cafeteria managers, textile specialists, clothing designers, buyers of clothing in department stores, demonstrators for commercial firms, and specialists in other similar positions.

Departments

For administrative purposes the College of Home Economics is organized into the Departments of Foods and Nutrition, Textiles and Clothing, and Home and Institutional Management.

Equipment

In addition to the usual classroom and laboratory facilities, the college maintains a well-equipped home management house, in which the students will keep house for a period of six weeks during either their junior or senior year.

Degree

The degree of Bachelor of Science is conferred for the satisfactory completion of four years of prescribed courses, of 132 semester hours. In accordance with the University policy, not less than three-fourths of the credits for graduation must be earned with grades of A, B, or C.

Prescribed Curricula

All students registered in the College of Home Economics are required to take the same work during the first two years. At the beginning of the junior year a student may continue with the General Home Economics Curriculum, or elect one of the following special curricula, or a combination of curricula. A student who wishes to teach Home Economics may register in Home Economics Education, in the College of Education (see Home Economics Education) at the beginning of the Junior Year.

Following are the outlines of the Curricula for General Home Economics, Textiles and Clothing, Foods and Nutrition, Home Economics Extension, and Institutional Management:

GENERAL HOME ECONOMICS

	Semester I	Semester II
Freshman Year		
Composition and Rhetoric (Eng. 1)	3	3
General Chemistry (Chem. 1)	4	4
*Language (Lang. 1)	4	4
Elementary Social Sciences (Soc. Sci. 1)	3	3
Home Economics Lectures (H. E. 1 y)	1	1
Physical Education (Phy. Ed. 1)	1	1
Reading and Speaking (P. S. 1)	1	1
	17	17
Sophomore Year		
Elements of Organic Chemistry (Chem. 12 f)	4	—
Elementary Foods (H. E. 31 y)	3	3
Composition and Design (H. E. 21 f)	3	—
Costume Design (H. E. 24 s)	—	3
Elementary Textiles and Clothing (H. E. 11 s)	—	3
Public Education in the United States (Ed. 2)	2	—
Physical Education (Phys. Ed. 2)	2	2
Language or Elective	3	6
	17	17
Junior Year		
Household Bacteriology (Bact. 3)	—	3
Nutrition (H. E. 131-132)	3	3
Marketing and Buying (H. E. 143)	2	—
Pattern Designing and Dressmaking (H. E. 111 f)	4	—
Special Applications of Physics (Physics 3)	—	4
†Science	3–4	—
Electives	5–4	7
	17	17
Senior Year		
Child Study (H. E. Ed. 102)	5	—
Management of the Home (H. E. 142 f)	5	—
Choice of one other unit of Practice Work	5	—
Home Architecture and Interior Decoration (H. E. 121)	—	3
Electives	—	12
	15	15

* This requirement may be waived for students entering college with three or more years of a language.

† Choice of General Zoology; Botany; Chemistry of Textiles; Chemistry of Foods.

TEXTILE AND CLOTHING CURRICULUM

	Semester I	Semester II
Junior Year		
Household Bacteriology (Bact. 3)	—	3
Special Applications of Physics (Physics 3)	—	4
Nutrition (H. E. 131)	3	—
Pattern Designing and Dressmaking (H. E. 111 f)	4	—
Chemistry of Textiles (Chem. 15 s)	—	4
Millinery (H. E. 113)	2	—
Electives	8	6
	17	17
Senior Year		
Management of the Home (H. E. 142)	5	—
Child Study (H. E. Ed. 102)	5	—
Practice in Textile and Clothing Problems (H. E. 114 f)	5	—
Home Architecture and Interior Decoration (H. E. 121)	—	3
Advanced Clothing (H. E. 112)	—	3
Electives	—	9
	15	15

FOODS CURRICULUM

Junior Year		
Household Bacteriology (Bact. 3)	—	3
Special Applications of Physics (Physics 3)	—	4
Nutrition (H. E. 131-132)	3	3
Marketing and Buying (H. E. 143)	2	—
Chemistry of Foods (Chem. 14 f)	4	—
Preservation and Demonstration (H. E. 133)	2	—
Electives	6	7
	17	17
Senior Year		
Child Study (H. E. Ed. 102)	5	—
Management of the Home (H. E. 142 f)	5	—
Choice of one other unit of Practice Work as: Field Practice with Home Demonstration Agent, Practice in Institutional Problems, Special Food Research, etc.	5	—
Home Architecture and Interior Decoration (H. E. 121)	—	3
Advanced Foods (H. E. 134)	—	3
Seminar (H. E. 101 s)	—	3
Electives	—	6
	15	15

INSTITUTIONAL MANAGEMENT CURRICULUM

	Semester I	Semester II
Junior Year		
Household Bacteriology (Bact. 3)	—	3
Special Applications of Physics (Physics 3)	—	4
Nutrition (H. E. 131-132)	3	3
Marketing and Buying (H. E. 143)	2	—
Institutional Management (H. E. 144)	3	3
Electives	9	4
	17	17
Senior Year		
Management of the Home (H. E. 142)	5	—
Child Study (H. E. Ed. 102)	5	—
Practice in Institutional Management (H. E. 145)	5	—
Advanced Institutional Management (H. E. 146)	—	3
Home Architecture and Interior Decoration (H. E. 121)	—	3
Electives	—	9
	15	15

HOME ECONOMICS EXTENSION CURRICULUM

Junior Year		
Nutrition (H. E. 131)	3	—
Marketing and Buying (H. E. 143)	2	—
Household Bacteriology (Bact. 3)	—	3
Special Applications of Physics (Physics 3)	—	4
Educational Psychology (Ed. 101)	3	—
Preservation and Demonstration (H. E. 133)	2	—
Technic of Teaching (Ed. 102)	—	3
Elective Science	3–4	—
Electives	4–3	7
	17	17
Senior Year		
Child Study (H. E. Ed. 102)	5	—
Management of the Home (H. E. 142)	5	—
Field Practice in Home Economics Extension (H. E. 151)	5	—
Home Architecture and Interior Decoration (H. E. 121)	—	3
Rural Life and Education (Ag. Ed. 102)	—	3
Objectives and Methods in Extension Education (Ag. Ed. 103)	—	3
Electives	—	6
	15	15

THE GRADUATE SCHOOL

C. O. APPLEMAN, *Dean.*

Graduate work is offered, under the supervision of the Dean of the Graduate School, by competent members of the various faculties of instruction and research. These constitute the faculty of the Graduate School.

The general administrative functions of the faculty are delegated to the Dean and Secretary of the School and a Graduate Council.

Work in accredited research laboratories of the U. S. Department of Agriculture and other local national research agencies may be accepted, when previously arranged, as work in residence for part of the requirement. These laboratories are located in easy reach of the University.

Admission to Graduate School

Graduates of colleges and universities of good standing are admitted to the Graduate School. Before entering upon graduate work all applicants must present evidence that they are qualified by their previous work to pursue with profit the graduate courses desired. Application blanks for admission to the Graduate School are obtained from the office of the Dean. After approval of the application, a matriculation card, signed by the Dean, is issued to the student. This card permits the student to register in the Graduate School. After payment of the fees the matriculation card is stamped and returned to the student. It is the student's certificate of membership in the Graduate School, and may be called for at any succeeding registration.

All applicants for graduate study in the University must matriculate in the Graduate School, even though they are not candidates for higher degrees. This includes the members of the summer session.

Admission to the Graduate School does not necessarily imply admission to candidacy for an advanced degree.

Registration

All students pursuing graduate work in the University, even though they are not candidates for higher degrees, are required to register in the office of the Dean of the Graduate School at the beginning of each semester. Students taking graduate work in the summer school are also required to register in the Graduate School at the beginning of each session. The program of work for the semester or summer session is entered upon three course cards, which are first signed by the professor in charge of the student's major subject and then by the Dean of the Graduate School. Two cards are retained in the office of the Graduate School. One is filed for record and the other returned to the professor in charge of the student's major subject. The student takes the third card and, in case of new students, also the matriculation card, to the Registrar's office, where a charge slip for the fee is issued. The charge slip, together with the course card, are presented at the office of the Financial Secretary for adjustment of fees. After certification by the Financial Secretary, class cards are issued by the Registrar. . Students will not be admitted to graduate courses without class cards. Course cards may be obtained at the Registrar's office or from the secretary in the Dean's office. The heads of departments usually keep a supply of these cards in their respective offices.

Graduate Courses

Graduate students must elect for credit in partial fulfillment of the requirements for higher degrees only those courses designated "For Graduates" or "For Advanced Undergraduates and Graduates." In special cases a student may, with the approval of the instructor in charge of the major subject and the Dean, elect for graduate credit one or two courses not listed for graduates. For such courses only partial credit will be allowed or extra work will be required of graduate students in the course. To encourage thoroughness in scholarship through intensive application, graduate students in the regular sessions taking courses carrying full graduate credit are limited to a program of 30 credit hours for the year. Students holding half time graduate assistantships are usually limited to eight credit hours per semester. One or two extra credits may be allowed if four or five of the total constitute Seminar and Research work.

Admission to Candidacy for Advanced Degrees

Applications for admission to candidacy for either the Master's or the Doctor's degree are made on application blanks, which are obtained at the office of the Dean of the Graduate School. These are filled out in dulpicate and first approved by the professor in charge of the major subject, after consultation with the professors in charge of the minor subjects, before they are acted upon by the Graduate Council. An official transcript of the student's undergraduate record and a statement of the graduate courses which the student has completed at other institutions must accompany the applications unless these are already on file in the Dean's office. This statement must be issued by the Dean, Registrar, or other officer of the Graduate School in which the work was done.

A student making application for admission to candidacy for the degree of Doctor of Philosophy must also obtain from the head of the Modern Language department, a statement that he possesses a reading knowledge of French and German.

The subject of the Master's thesis or the Doctor's dissertation must appear on the application.

Each candidate for the Master's degree is required to make application for admission to candidacy not later than the first week of the second semester of the academic year in which the degree is sought, but not until at least the equivalent of one semester's work has been completed.

Candidates for the Doctor's degree must be admitted to candidacy not later than one academic year prior to the granting of the degree. Applications of these candidates must be on file in the office of the Graduate School not later than October 1 of the same year.

Admission to candidacy in no case assures the student of a degree, but merely signifies that the candidate has met all of the formal requirements and is considered by his instructors sufficiently prepared and able to pursue such graduate study and research as is demanded by the requirements of the degree sought. The candidate's record in graduate work must show superior scholarship. A preliminary examination or such other substantial tests as the departments elect may also be required of candidates for the degree of Doctor of Philosophy.

Requirements for the Master's Degree

The degree of Master of Science, Master of Arts, or Master of Science in Engineering will be conferred upon resident graduates who meet the following requirements:

1. The prospective candidate is required to make application for admission to candidacy as prescribed under that heading.

2. The candidate must have received the Bachelor's degree from a college or university of sufficiently high standing and must have the necessary prerequisites for the field of advanced work chosen.

3. During a period of at least one academic year, the student must pursue a course of approved graduate study. Such a course is equivalent to 30 semester credits including a thesis approved by a committee of the faculty. From 10 to 12 credits must lie outside the major subject and form a coherent group of courses intended to supplement and support the major work. At least 18 credits, including the thesis credits, must be devoted to the major subject. The number of major credits allowed for thesis work will range from 6 to 10, depending upon the amount of work done and upon the course requirements in the major subject. The maximum credit for the one hour per week seminar courses is limited to four semester hours in the major subject and to two semester hours in the minor subjects.

4. The thesis required for the Master's degree should be typewritten on a good quality of paper 11x8½ inches in size and one copy bound in a special cover, obtained at the book store. This copy must be filed in the office of the Graduate School not later than two weeks before commencement.

5. The candidate must pass a final oral examination on all graduate work, including the thesis.

Doctor of Philosophy

1. Prerequisites for admission to candidacy for the Doctor's degree. The candidate must be a graduate of a standard college, must have a reading knowledge of French and German, and the necessary basic training in the chosen field for advanced work.

2. Three years of graduate study will usually be required. The first two of these years may be spent in other institutions offering standard graduate work. On a part-time basis the time needed will be correspondingly increased. The degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high attainments in scholarship and ability to carry on independent research in the special field in which the major work is done.

3 The candidate must select a major and one or two closely related minor subjects, constituting a single field of research.

4. The candidate must present a dissertation within the field of research selected. This must be in the hands of the Dean of the Graduate School in printed or typewritten form at least two weeks before the time at which degrees are granted.

5. The candidate must pass a final oral examination in the major and minor subjects. The examination will be given by a committee appointed by the Dean.

Advanced Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of this University who have obtained a Bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have been engaged successfully in acceptable engineering work for three years.

2. His registration for a degree must be approved at least 12 months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.

3. He shall present a satisfactory thesis on an approved subject.

4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.

Graduate Fees

Each graduate student is subject to a matriculation fee of $10.00, a fixed charge of $1.50 per semester credit, and a diploma fee of $10.00.

Graduate Work in the Summer

Work done in the Summer Session of the University under the rules and regulations of the Graduate School may be counted as residence toward a graduate degree.

Students taking their major work in the field of Education may satisfy the requirements for the Master's degree by attending the Summer School for four summers and submitting a satisfactory thesis.

Fellowships and Graduate Assistantships

A number of fellowships and graduate assistantships have been established by the University. They are open to graduates of standard colleges and universities. All applications for both fellowships and graduate assistantships should be filed with the Dean of the Graduate School not later than May 15 of each year. Blanks for this purpose may be obtained from the office of the Graduate School. Applications must be accompanied by sufficient evidence of necessary training and ability to pursue with profit the graduate work desired. Such evidence will include testimonials from instructors and an official transcript of the undergraduate work.

The fellowships are worth $500, and it is possible for a fellow to complete the requirements for the Master's degree in one academic year. In certain cases fellows may be required to spend two or three summer months in addition to the nine months of the college year. Each fellow is expected to give a limited portion of his time to instruction or perform equivalent prescribed duties for his major department.

The stipend attached to the graduate assistantships is $1,000 per annum and the appointments are made for twelve months, with one month's vacation. The minimum time required for the Master's degree is two years, since one-half of the assistant's time is devoted to instruction or research. Several $1,000 research assistantships are offered by the Experiment Station and the service required is in connection with research projects. Graduate students holding appointments as fellows or graduate assistants are exempt from all fees except the diploma fee and laboratory fees in certain minor courses.

SUMMER SCHOOL

WILLARD S. SMALL, *Director.*

A summer session of six weeks is conducted at College Park. The program is designed to serve the needs of three classes of students: teachers and supervisors of the several classes of school work—elementary, secondary, and vocational; special students, as farmers, breeders, dairymen, home makers, chemists, public speakers, graduate students; and students who are candidates for degrees in agriculture, arts and sciences, education, engineering, and home economics.

Terms of Admission

Teachers and special students not seeking a degree are admitted without examination to the courses of the summer session for which they are qualified. All such selection of courses must be approved by the Director of the Summer School.

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College or School in which he wishes to secure the degree.

Credits and Certificates

The semester hour is the unit of credit as in other sessions of the University. During the summer session, a lecture course meeting five times a week for six weeks and requiring the standard amount of outside work, is given a weight of two semester hours.

Appropriate educational courses satisfactorily completed will be credited by the State Superintendent of Schools towards meeting the minimum requirements of professional preparation as follows:

(1) For teaching in the elementary schools of the State, including renewal of certificates and advancing the grade of certificates.

(2) For teaching in high schools of the State and for renewal of high school certificates.

(3) For teaching vocational agricultural and home economics and for renewal of vocational teachers' certificates.

(4) For high school principalships.

(5) For elementary school principalships.

Summer Graduate Work

Special arrangements have been made for persons wishing to do graduate work in summer. Teachers and other graduate students working for a degree on the summer plan must meet the same requirements and proceed in the same way as do students enrolled in the other sessions of the University.

For detailed information in regard to the Summer Session consult the special Summer School announcement, issued annually in April.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ROBERT S. LYTLE, *Major Infantry (D.O.L.), U. S. Army, Professor*

RESERVE OFFICERS' TRAINING CORPS

The work in this department is based upon the provisions of Army Regulations No. 145-10, War Department.

Authorization

An infantry unit of the Senior Division of the Reserve Officers' Training Corps was established at the University under the provisions of the Act of Congress of June 3, 1916, as amended.

Object

The primary object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. It is intended to attain this object during the time the students are pursuing their general or professional studies with the least practical interference with their civil careers, by employing methods designed to fit men, physically, mentally, and morally for pursuits of peace as well as pursuits of war. It is believed that such military training will aid greatly in the development of better citizens.

Advanced Work

Students who complete the basic course satisfactorily and who are recommended by the Professor of Military Science and Tactics, and whose application is approved by the President, may continue their military training for a period of two years in the Advanced Course.

Time Allotted

For first and second year, basic course, three periods a week of not less than one hour each are devoted to this work, of which at least one hour is utilized for theoretical instruction.

For third and fourth years, advanced course, elective, five periods a week of not less than one hour each are devoted to this work, of which at least three periods are utilized for theoretical instruction.

Physical Training

Physical training forms an important part in military instruction, and it is the policy of the Military Department to encourage and support the physical training given by civilian teachers, thus co-operating in an effort

to promote a vigorous manhood. Special effort is made by corrective training to improve the physical condition of students needing such training.

Physical Examination

All members of the Reserve Officers' Training Corps are required to be examined physically at least once after entering the University.

Uniforms

Members of the Reserve Officers' Training Corps must appear in proper uniform at all military formations and at such other times as the Professor of Military Science and Tactics may designate with the approval of the President.

Uniforms, or commutation in lieu of uniforms for the Reserve Officers' Training Corps, will be furnished free by the Government. The uniforms are the regulation uniforms of the United States Army, with certain distinguishing features; or, if commutation of uniforms is furnished, then such uniform as may be adopted by the University. Such uniforms must be kept in good condition by the students. They remain the property of the Government; and, though intended primarily for use in connection with military instruction, may be worn at any other time unless the regulations governing their use are violated. The uniform cannot be worn in part. Uniforms which are furnished by the Government will be returned to the Military Department at the end of the year or before, if the student leaves the University. In case commutation of uniforms is furnished, the uniform so purchased becomes the property of the students upon completion of two years' work.

Commutation

Those students who elect the advanced course and who have signed the contract with the Government to continue in the Reserve Officers' Training Corps for the two remaining years of the advanced course are entitled to a small per diem money allowance payable quarterly from and including the date of contract until they complete the course at the institution.

Summer Camps

An important and excellent feature of the Reserve Officers' Training Corps is the summer camp. In specially selected parts of the country, camps are held for a period not exceeding six weeks for students who are members of the Reserve Officers' Training Corps. These camps are under the close and constant supervision of army officers, and are intended primarily to give a thorough and comprehensive practical course of instruction in the different arms of the service.

Parents may feel assured that their sons are carefully watched and safeguarded. Wholesome surroundings and associates, work and healthy recreation are the keynote to contentment. Social life is not neglected, and the morale branch exercises strict censorship over all social functions.

The attendance at summer camps is compulsory only for those students who are taking the advanced course, which as has been previously stated is elective.

The students who attend the summer camps are under no expense. The Government furnishes transportation from the institution to the camp and from the camp to the institution, or to the student's home, unless the mileage is greater than that from the camp to the institution. In this case, the amount of mileage from the camp to the institution is allowed the student. Quarters and food are furnished. The Advanced Course students, in addition to receiving quarters and food, are paid seventy cents ($0.70) for each day spent in camp.

Commissions

(a) Each year, upon completion of the Advanced Course, students qualified for commissions in the Reserve Officers' Corps will be selected by the head of the institution and the professor of Military Science and Tactics.

(b) The number to be selected from each institution and for each arm of the service will be determined by the War Department.

(c) This University has been designated by the War Department annually for several consecutive years as a "Distinguished College." This designation indicates that the work of its R. O. T. C. unit has been recognized by the Federal Government as being of a superior order.

This classification also permits the Professor of Military Science and Tactics to designate an Honor Graduate from the members of the second year Advanced Course, who may be commissioned as Second Lieutenant of Infantry in the Regular Army, if he so desires, by passing the required physical examination. This designation as Honor Graduate exempts the individual selected from all academic examinations usually required for a Regular Army Commission.

The acceptance of this opportunity is, of course, optional with the student.

Credits

Military instruction at this University is on a par with other university work, and the requirements of this department as to proficiency the same as with other departments.

Those students who have received military training at any educational institution under the direction of an army officer detailed as professor of military science and tactics may receive such credit as the professor of military science and tactics and the President may jointly determine.

DEPARTMENT OF PHYSICAL EDUCATION AND RECREATION

The Department of Physical Education and Recreation, in co-operation with the Military Department, controls all physical training and intramural and intercollegiate athletics. As far as possible the work along all these lines is co-ordinated with a view to having each student in the institution engage in some form of exercise best suited to his particular case.

The work at present reaches all students either through the military exercises, through intramural sports, through intercollegiate athletics, or through the special work given to those not particularly fitted for any of these forms. At the beginning of the year a physical examination is given the students, especial attention being paid to the members of the freshman class. All members of the freshman and sophomore classes who are physically sound take part in the military drills and exercises. To meet the particular needs of freshmen and sophomores who do not qualify physically for military training, special programs of setting-up exercises and drills are devised.

Physical Education beyond the freshman and sophomore classes is not compulsory, but the military work is continued by many. Those who do not engage in it are offered opportunity to play tennis, engage in intramural games, or take part in some other form of competitive sport. All students have opportunities to become members of the squads playing in intercollegiate athletics. With the exception possibly of a few members of the junior and senior classes, the University is reaching all its students with some form of developmental physical exercise. A modern gymnasium, two athletic fields, and tennis courts offer excellent facilities.

SCHOOL OF DENTISTRY

J. BEN ROBINSON, *Dean.*

GEORGE M. ANDERSON, D.D.S.
ROBERT P. BAY, M.D.
JOSE A. DAVILA, D.D.S.
HORACE M. DAVIS, D.D.S.
OREN H. GAVER, D.D.S.
EDWARD HOFFMEISTER, A.B., D.D.S.
BURT B. IDE, D.D.S.
HOWARD J. MALDEIS, M.D.
ROBERT L. MITCHELL, Phar. G., M.D.
ALEXANDER H. PATERSON, D.D.S., F.A.C.D.
J. BEN ROBINSON, D.D.S., F.A.C.D.

The University of Maryland was created by an act of the Maryland Legislature, December 18th, 1807, for the purpose of offering a course of instruction in medical science. There were at that period but four medical schools in America—the University of Pennsylvania, founded in 1765; Harvard University, in 1782; Dartmouth College, in 1798, and the College of Physicians and Surgeons of New York, May, 1807.

The first lectures delivered on Dentistry in America were given by Horace H. Hayden, M. D., at the University of Maryland in the year 1837. A movement was started at that time to create a department of dentistry, and application was made to the Regents of the University for permission to establish such work in connection with the School of Medicine. This request being refused, a charter was applied for and granted in 1840, establishing the Baltimore College of Dental Surgery, the first dental school in the world. Lectures were begun in 1840, and the first class graduated in 1841. In 1873 the Maryland Dental College, an offspring of the Baltimore College of Dental Surgery, was organized, and continued instruction in dental subjects until 1879, when it was consolidated with the Baltimore College of Dental Surgery.

A department of dentistry was organized at the University of Maryland in the year 1882, graduating its first class in 1883 and each subsequent year to the merger—June, 1923. This school was chartered as a corporation and continued as a privately owned and directed institution until 1920, when it became a State institution. The Dental Department of the Baltimore Medical College was established in 1895, continuing until 1913, when it merged with the Dental Department of the University of Maryland.

The final combining of the dental educational interests of Baltimore was affected June 15, 1923, by the amalgamation of the University of Maryland School of Dentistry and the Baltimore College of Dental Surgery, continuing the latter as the School of Dentistry of the University of Maryland.

Thus we find in the present School of Dentistry of the University a grouping and concentration of the various efforts at dental education in Maryland. From these component elements have radiated developments of the art and science of dentistry until the potential strength of the alumni is second to none either in numbers or degree of service to the profession.

Requirements for Matriculation

The School of Dentistry is a member in good standing of the American Association of Dental Schools, and conforms to the rules and regulations of that body.

The present requirement for matriculation in the School of Dentistry is graduation from an accredited high school with fifteen units of credit, accompanied by a certificate from the principal of the high school that the applicant is in every way qualified to do college work. This requirement will admit students to the five-year course in dentistry, now being required.

Applicants for matriculation must present their credentials for verification to the Registrar of the University of Maryland, Baltimore, Maryland. A blank form for submitting credentials may be had by applying to the Dean of the School of Dentistry. The blank must be filled out in full as indicated by various items of the form, signed by the prospective dental student, and returned to the Registrar's office with the $2.00 investigation fee.

Length of Course

A five-year course of instruction is offered. The many apparent advantages in the consecutive five years of professional study over the one-year of college work and four years of dentistry, or the two years of college work and three years of dentistry, offered by most dental schools, has influenced the adoption of the five-year plan. Admission to advanced standing may be secured by offering acceptable college credits for academic requirements appearing in the first year.

Advanced Standing

Applicants showing in addition to high school requirements, college credits of equal value in courses contained in the dental curriculum may receive advanced credit on those subjects. Thirty semester hours of college credit entitle the applicant to second-year rating, with the opportunity to complete the course in four years, provided his college record shows the following to the credit of the applicant:

Inorganic Chemistry	8 hours
Zoology	8 hours
Mathematics	6 hours
English	6 hours

Graduates from reputable and accredited colleges and universities or those with at least two years completed work from Class A medical schools,

will be given advanced credit in completed subjects and advanced standing in the course.

A student who desires to transfer to this school from another recognized dental school must present credentials signed by the Dean, Secretary, or Registrar of the school from which he is transferring. No student who has incurred a condition or a failure in any subject at the school from which he desires to transfer will be accepted. The student transferring must furnish evidence that he is in possession of the necessary high school credits.

Attendance Requirements

In order to receive credit for a full session, each student must have entered and be in attendance on the day the Regular Session opens, at which time lectures in all classes begin, and remain until the close of the session, the dates for which are announced in the Calendar.

In case of serious personal illness as attested by a physician, a student may register not later than the twentieth day following the advertised opening of the Regular Session. Students may register and enter not later than ten days after the beginning of the session, but such delinquency will be charged as absence from class.

In certain unavoidable circumstances of absence the Dean may honor excuses, but students with less than a minimum of eighty-five per cent. attendance will not be promoted to the next succeeding class. Regular attendance is demanded of all students. This rule will be rigidly enforced.

Promotion

In order that credit be given in any subject a grade of 75 per cent. must be earned. A student to be promoted to the next succeeding year must have passed courses amounting to at least 80 per cent. of the total scheduled hours of the year.

A grade between 60 per cent. and passing mark is a *condition*. A grade below 60 per cent. is a *failure*. A condition may be removed by an examination. In such effort inability to make a passing mark is considered a *failure*. A failure can be removed only by repeating the course. A student with combined conditions and failures amounting to 40 per cent. of the scheduled hours of the year will be required to repeat his year. Students who are required to repeat courses must pay regular fees.

Equipment

A complete list of all necessary instruments and materials for technic and clinic courses and textbooks for lecture courses will be announced for the various classes. Each student will be required to provide himself with whatever is necessary to meet the needs of his course and present same to a responsible class officer for inspection. No student will be permitted to go on with his class who does not meet this requirement.

Deportment

The profession of dentistry demands, and the School of Dentistry requires evidence of good moral character of its students. The conduct of the student in relation to his work and fellow-students will indicate his fitness to be taken into the confidence of the community as a professional man. Integrity, sobriety, temperate habits, truthfulness, respect for authority and associates, honesty in the transaction of business affairs as a student will be considered as evidence of good moral character necessary to the granting of a degree.

Requirement for Graduation

The degree of Doctor of Dental Surgery is conferred upon the completion of the five-year course of study, each year to consist of thirty-two weeks, and each week to consist of six days of school work. The candidate must be twenty-one years of age, must possess a good moral character, and must have passed in all branches of the curriculum.

Expenses

Matriculation fee (paid only once)	$ 10.00
Tuition, resident student	200.00
Tuition, non-resident student	250.00
Dissecting fee (paid only once)	15.00
Laboratory fee	20.00
Graduation fee	10.00
Locker fee (last two years)	3.00

Matriculation fee must be paid when registration card is issued. Tuition fee may be paid one-half October first and one-half February first. Dissecting fee must be paid to secure class card for admission to clinics. Laboratory fee must be paid at the beginning of the session. Graduation fee must be paid on May first.

All students of the several classes will be required to obtain a card of registration at the office of the Registrar, pay to the Comptroller one-half of the tuition fee, and the full amount of the laboratory fee before being regularly admitted to class work. The balance of tuition and other incidental fees must be in the hands of the Comptroller on February 1st, before beginning work of the second semester.

According to the policy of the School of Dentistry no fees will be returned. In case the student discontinues his course any fees paid will be credited to a subsequent course, but are not transferable.

These requirements will be rigidly enforced.

Students may matriculate by mail by sending the matriculation fee to the Registrar, University of Maryland, Lombard and Greene Streets, Baltimore, Md.

THE SCHOOL OF LAW

HENRY D. HARLAN, *Dean.*

THE FACULTY COUNCIL

HON. HENRY D. HARLAN, A.M., LL.B., LL.D.
RANDOLPH BARTON, JR., Esq., A.B., LL. B.
EDWIN T. DICKERSON, Esq., A.M., LL.B.
CHARLES MCHENRY HOWARD, Esq.,A.B., LL.B.
HON. MORRIS A. SOPER, A.B., LL.B.
ROBERT H. FREEMAN, Esq., A.M., LL.B.
W. CALVIN CHESTNUT, Esq., A.B., LL.B.
G. RIDGELY SAPPINGTON, Esq., LL.B.

While the first faculty of law of the University of Maryland was chosen in 1813, and published in 1817 "A Course of Legal Study Addressed to Students and the Profession Generally," which the North American Review pronounced to be "by far the most perfect system for the study of law which has ever been offered to the public," and which recommended a course of study so comprehensive as to require for its completion six or seven years, no regular school of instruction in law was opened until 1823. This was suspended in 1836 for lack of proper pecuniary support. In 1869 the School of Law was organized, and in 1870 regular instruction therein was again begun. From time to time the course has been made more comprehensive, and the staff of instructors increased in number. Its graduates now number more than two thousand, and included among them are a large proportion of the leaders of the Bench and Bar of the State and many who have attained prominence in the profession elsewhere.

The building for the School of Law adjoins that for the School of Medicine, and part of its equipment is a large library maintained for use of the students, which contains carefully selected text-books on the various subjects embraced in the curriculum, reports of American and English courts, digests and standard encyclopedias. No fee is charged for the use of the library. Other libraries also are available for students.

Course of Instruction

The School of Law is divided into two divisions, the Day School and the Evening School. The same curriculum is offered in each school, and the standards of work and graduation requirements are the same.

The Day School course covers a period of three years of thirty-two weeks each, exclusive of holidays. The class sessions are held during the day, chiefly in the morning hours. The Practice Court sessions are held on Friday evenings from 8.00 to 10.00 P. M.

The Evening School course covers a period of four years of forty weeks each, exclusive of holidays. The class sessions are held on Monday, Wednesday, and Friday evenings of each week from 6.30 to 9.30 P. M. This plan leaves the alternate evenings for study and preparation by the student.

The course of instruction in the School of Law is designed thoroughly to equip the student for the practice of his profession when he attains the Bar. Instruction is offered in the various branches of the common law, of equity, of the statute law of Maryland, and of the public law of the United States. The course of study embraces both the theory and practice of the law, and aims to give the student a broad view of the origin, development, and function of law, together with a thorough practical knowledge of its principles and their application. Analytical study is made of the principles of substantive and procedural law, and a carefully directed practice court enables the student to get an intimate working knowledge of procedure.

Special attention is given to the statutes in force in Maryland, and to any peculiarities of the law in that State, where there are such. All of the subjects upon which the applicant for the Bar in Maryland is examined are included in the curriculum. But the curriculum includes all of the more important branches of public and private law, and is well designed to prepare the student for admission to the Bar of other States.

Requirements for Admission

Applicants for admission as candidates for a degree are required to produce evidence of the completion of at least two years of college work, or such work as would be accepted for admission to the third or junior year in the College of Liberal Arts of an accredited college or university in this State.

Special Students—A limited number of students applying for entrance with less than the academic credit required of candidates for the law degree, who are over twenty-one years of age, and who, in the opinion of the Faculty Council, possess special qualifications for the study of law, may be admitted as candidates for the certificate of the school, but not for the degree.

Combined Program of Study Leading to the Degrees of Bachelor of Arts and Bachelor of Laws

The University offers a combined program in arts and law leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students pursuing this combined program in college and pre-legal subjects will spend the first three years in the College of Arts and Sciences at College Park. The fourth year they will register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent work in the Evening School, the degree of Bachelor of Arts will be awarded. The degree of Bachelor of Laws will be awarded

upon the completion of the work prescribed for graduation in the School of Law.

Details of the combined course may be had upon application to the Registrar, University of Maryland, College Park, Md., or by reference to page 95.

Advanced Standing

Students complying with the requirements for admission to the school who have, in addition, successfully pursued the study of law elsewhere in an accredited law school, may, upon presentation of a certificate from such accredited law school showing an honorable dismissal therefrom, and the successful completion of equivalent courses therein, covering at least as many hours as are required for such subjects in this school, receive credit for such courses and be admitted to advanced standing. No credit will be given for study pursued in a law office, and no degree will be conferred until after one year of residence and study at this school.

Fees and Expenses

The charges for instruction are as follows:	
Registration fee to accompany application	$ 2.00
Matriculation fee, payable on first registration	10.00
Diploma fee, payable upon graduation	10.00
Tuition fee, per annum:	
Day School	$200.00
Evening School	150.00

An additional tuition fee of $50.00 per annum must be paid by students who are non-residents of the State of Maryland.

The tuition fee is payable in two equal instalments, one-half at the time of reigstration for the first semester, and one-half at the time of registration for the second semester.

Further information and a special catalogue of the School of Law may be had upon application to the School of Law, University of Maryland, Lombard and Greene Streets, Baltimore, Md.

THE UNIVERSITY OF MARYLAND
SCHOOL OF MEDICINE
AND
COLLEGE OF PHYSICIANS AND SURGEONS

J. M. H. ROWLAND, *Dean.*

MEDICAL COUNCIL

ARTHUR M. SHIPLEY, M.D., Sc.D.
GORDON WILSON, M.D.
HARRY FRIEDENWALD, A.B., M.D.
WILLIAM S. GARDNER, M.D.
STANDISH MCCLEARY, M.D.
JULIUS FRIEDENWALD, A.M., M.D.
J. M. H. ROWLAND, M.D.
ALEXIUS MCGLANNAN, A.M., M.D.
HUGH R. SPENCER, M.D.
H. BOYD WYLIE, M.D.
CARL L. DAVIS, M.D.
WILLIAM H. SCHULTZ, Ph.B., Ph.D.
MAURICE C. PINCOFFS, S.B., M.D.
FRANK W. HACHTEL, M.D.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries and the first medical college library in America.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837); and here were first installed independent chairs for the teaching of diseases of women and children (1867), and of eye and ear diseases (1873).

This School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for senior students first was established.

Clinical Facilities

The University Hospital, property of the University, is the oldest institution for the care of the sick in Maryland. It was opened in September, 1823, and at that time consisted of four wards, one of which was reserved for eye cases.

Besides its own hospital, the School of Medicine has control of the clinical facilities of the Mercy Hospital, in which were treated last year more than 30,000 persons.

In connection with the University Hospital, an outdoor obstetrical clinic is conducted. During the past year about 1,300 cases were treated in the hospital and outdoor clinic.

The hospital now has about 285 beds—for medical, surgical, obstetrical, and special cases; and furnishes an excellent supply of clinical material for third and fourth-year students.

Dispensaries and Laboratories

The dispensaries associated with the University Hospital and Mercy Hospital are organized on a uniform plan in order that teaching may be the same in each. Each dispensary has departments of Medicine, Surgery, Obstetrics, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopedics, Proctology, Dermatology, Throat and Nose, and Tuberculosis. All students in their junior year work one day of each week in one of these dispensaries; all students in the senior year work one hour each day; 91,000 cases were treated last year, which gives an idea of the value of these dispensaries for clinical teaching.

Laboratories conducted by the University purely for medical purposes are the Anatomical, Chemical, Experimental Physiology, Physiological Chemistry, Histology and Embryology, Pathology and Bacteriology, Clinical Pathology, Pharmacology, and Operative Surgery.

Prizes and Scholarships

The following prizes and scholarships are offered in the School of Medicine. (For details see School of Medicine Bulletin.)

Faculty Medal: Hirsh Prize; The Dr. Samuel Leon Frank Scholarship; Hitchcock Scholarship; The Randolph Winslow Scholarship; The University Scholarship; The Frederica Gehrmann Scholarship; The Dr. Leo Karlinsky Scholarship; The Clarence and Genevra Warfield Scholarships; Walter B. Brooks Scholarship; Israel and Cecilia A. Cohen Scholarship.

Requirements for Admission

Admission to the curriculum in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland, Baltimore, Maryland. This certificate is obtained on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student's Certificate are as follows:

(a) The completion of a standard four-year high school course or the equivalent, and in addition:

*(b) Two years, sixty semester hours of basic college credits, including chemistry, biology, physics, and English, and exclusive of Military Drill or Physical Education as outlined in the Pre-Medical Curriculum, or its equivalent, will meet the minimum requirement for admission. Students are strongly recommended, however, to complete the three-year pre-medical curriculum of 99 semester hours before making application for admission.

Women are admitted to the School of Medicine of this University.

Expenses

The following are the fees for students in the School of Medicine:

Matriculation	*Tuition* Resident	*Tuition* Non-Resident	*Laboratory*	*Graduation*
$10.00 (only once)	$300.00	$400.00	$20.00 (yearly)	$10.00

Estimated living expenses for students in Baltimore:

Items	*Low*	*Average*	*Liberal*
Books	$50	$75	$100
College Incidentals	20	20	20
Board, eight months	200	250	275
Room rent	64	80	100
Clothing and laundry	50	80	150
All other expenses	25	50	75
Total	$409	$556	$720

* For admission to the Pre-Medical Curriculum the requirements are the same as for the freshman class in the College of Arts and Sciences of the University with the prescribed addition of two years of one foreign language. (See Section I, "Entrance.")

SCHOOL OF NURSING

ANNIE CRIGHTON, *R.N., Director and Superintendent of Nurses.*

The University of Maryland School of Nursing was established in the year 1889. Since that time it has been an integral part of the University of Maryland Hospital.

The school is non-sectarian, the only religious services being morning prayers.

The University of Maryland Hospital is a general hospital containing about 285 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing, including experience in the operating room.

The school offers the student nurse unusual advantages in its opportunity for varied experience and in its thorough curriculum taught by well-qualified instructors and members of the medical staff of the University.

Programs Offered

The program of study of the School is planned for two groups of students: (a) The three-year group; (b) the five-year group.

Requirements for Admission

In order to become a candidate for admission to the three-year program of the School, application must be made in person or by letter to the superintendent of nurses. An application by letter should be accompanied by a statement from a clergyman, testifying to good moral character, and from a physician certifying to sound health and unimpaired faculties. No person will be considered who is not in good physical condition and between the ages of 18 and 35. She must also show that she has a high-school education or its equivalent. This is the minimum requirement, for women of superior education and culture are given preference provided they meet the requirements in other particulars.

The fitness of the applicant for the work and the propriety of dismissing or retaining her at the end of her term of probation is left to the decision of the superintendent of nurses. Misconduct, disobedience, insurbordination, inefficiency, or neglect of duty is sufficient cause for dismissal at any time by the superintendent of nurses, with the approval of the President of the University.

Students are admitted to this group in February and September.

The requirements for admission to the five-year program of the School of Nursing are the same as for the other colleges and schools. (See Section I, "Entrance.")

Three-Year Program

The three-year program is designed to meet the requirements for the Diploma in Nursing, and comprises the work of the Junior, Intermediate, and Senior years.

Junior Year

The Junior Year is divided into two periods. The first term is the preparatory period (four months) and the second the junior term.

In the preparatory term the student is given practical instruction in the following:

Junior Year—First Term

1. The making of hospital and surgical supplies. The cost of hospital materials, apparatus, and surgical instruments.
2. Household economics and the preparation of foods.
3. The hospital outpatients department and dispensary.

During this term the practical work is done under constant supervision, and teaching is given correlatively in the class room.

Excursions are made to markets, hygienic dairies, linen-rooms, laundry, and storeroom.

The maximum number of hours per week in formal instruction divided into lecture and laboratory periods is thirty hours, and includes courses in anatomy and physiology, dietetics, materia medica, personal hygiene, bacteriology, practical nursing, drugs and solutions, household economics, short course in ethics and history of nursing.

At the close of the first half of the junior year the students are required to pass satisfactorily both the written and oral tests, and failure to do so will be sufficient reason to terminate the course at this point.

Subsequent Course

The course of instruction, in addition to the probationary period, occupies two and three-fourths years, and students are not accepted for a shorter period.

After entering the wards, the students are constantly engaged in practical work under the immediate supervision and direction of the head nurses and instructors.

Throughout the three years, regular courses of instruction and lectures are given by members of the medical and nursing school faculties.

Junior Year—Second Term

During this period the students receive theoretical instruction in massage, general surgery, urinalysis, and advanced nursing procedures. Practical instruction is received in the male and female, medical, surgical, and children's wards.

Intermediate Year

During this period the theoretical instruction includes pediatrics, infectious diseases, obstetrics, gynecology, diet in disease and orthopedics. The practical work provides experience in the nursing of obstetrical and gynecological patients in the operating rooms and the outpatient department.

Senior Year

During this period the student receives short courses of lectures on subjects of special interest. These include a consideration of the work of institutions of public and private charities, of settlements, and of various branches of professional work in nursing.

Experience is given in executive and administration work to those showing exceptional ability in the senior year. With these students conferences are held on administration and teaching problems.

Hours on Duty

During the preparatory period the students are engaged in class work for the first three months with no general duty in the hospital, and for the remainder of this period they are sent to the wards on eight hour duty. During the Junior, Intermediate, and Senior years the students are on eight hour day duty and ten hours night duty, with six hours on holidays and Sundays. The night duty periods are approximately two months each, with one day at the termination of each term for rest and recreation. The period of night duty is approximately five to six months during the three years. The first three months of the preparatory period are devoted to theoretical instruction given entirely in the lecture and demonstration rooms of the training school and hospital and medical school laboratories.

Sickness

A physician is in attendance each day, and when ill all students are cared for gratuitously. The time lost through illness in excess of two weeks, during the three years, must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

Vacations

Vacations are given between June and September. A period of three weeks is allowed the student at the completion of first and second years.

Expenses

A student receives her board, lodging, and a reasonable amount of laundry from the date of entrance. During her period of probation she provides her

own uniforms made in accordance with the hospital regulations. After being accepted as a student nurse she wears the uniform furnished by the hospital. The student is also provided with textbooks, and in addition to this is paid five dollars ($5.00) a month. Her personal expenses during the course of training and instruction will depend entirely upon her individual habits and tastes.

Five-Year Program

In addition to the regular three-year course of training the University offers a combined Academic and Nursing program leading to the degree of Bachelor of Science and a Diploma in Nursing.

The first two years of the course (or pre-hospital period), consisting of 68 semester hours, as shown on page 94 of this catalogue, are spent in the College of Arts and Sciences of the University, during which period the student has an introduction to the general cultural subjects which are considered fundamental in any college training. At least the latter of these two years must be spent in residence at College Park in order that the student may have her share in the social and cultural activities of college life. The last three years are spent in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, which is also affiliated with the School of Medicine of the University. In the fifth year of the combined program certain elective courses such as Public Health Nursing, Nursing Education, Practical Sociology, and Educational Psychology are arranged.

Degree and Diploma

The Diploma in Nursing will be awarded to those who have completed satisfactorily the three-years' program.

The degree of Bachelor of Science and the Diploma in Nursing are awarded to the students who complete successfully the prescribed combined academic and nursing program.

Scholarships

One scholarship has been established by the alumnae of the training school. It entitles a nurse to a six-weeks' course at Teachers College, New York. This scholarship is awarded at the close of the third year to the student whose work has been of the highest excellence, and who desires to pursue post-graduate study and special work.

An alumnae pin is presented by the Woman's Auxiliary Board to the student who, at the completion of three years, shows exceptional executive ability.

A scholarship of the value of $50.00, known as the Edwin and Leander M. Zimmerman Prize, is given in the senior year for practical nursing.

SCHOOL OF PHARMACY

A. G. Du Mez, *Dean.*

E. F. Kelly, *Advisory Dean.*

Executive Committee
A. G. Du Mez
E. F. Kelly
Charles C. Plitt
Glenn L. Jenkins
J. Carlton Wolf
B. Olive Cole
H. E. Wich

The School of Pharmacy was organized in 1841, largely at the instance of members of the Faculty of Medicine, and for a time the lectures were delivered at the Medical School. Later it became separated, and continued as an independent organization called the Maryland College of Pharmacy, until it finally became part of the University in 1904. With but one short intermission, which was prior to 1865, it has continuously exercised its functions as a teaching school of pharmacy.

Location

The School of Pharmacy is located at 6 and 8 South Greene Street, in close proximity to the Schools of Medicine, Law, and Dentistry.

Policy and Degrees

The chief purpose of this school is to prepare its matriculates for the intelligent practice of dispensing pharmacy, although certain advanced work intended to fit the student for service in the other branches of pharmacy is offered.

Upon completion of the first three years of the course, the diploma of Graduate in Pharmacy (Ph. G.) is awarded, which satisfies the college educational requirements of the various States for registration as a pharmacist.

The degree of Bachelor of Science in Pharmacy (B. S. in Phar.) will be given upon the successful completion of the work prescribed for the entire four years.

Combined Curriculum in Pharmacy and Medicine

A combined curriculum has been arranged with the School of Medicine of the University by which students may obtain the degree of Bachelor of Science in Pharmacy and Doctor of Medicine in seven years. Students who

successfully complete the first three years of the course in Pharmacy and an additional four semester hours in Zoology, and show that they are qualified by character and scholarship to enter the medical profession, are eligible for admission into the School of Medicine of the University; and upon the successful completion of the first two years of the medical course will be awarded the degree of Bachelor of Science in Pharmacy by the School of Pharmacy.

This privilege will be open only to students who maintain a uniformly good scholastic record during the first two years of the course in Pharmacy; and those who wish to avail themselves of it must so advise the School of Pharmacy before entering upon the work of the third year, in order that provision may be made for the additional instruction in Zoology.

Recognition

This school holds membership in the American Association of Colleges of Pharmacy. The object of the Association is to promote the interests of pharmaceutical education; and all institutions holding membership must maintain certain minimum requirements for entrance and graduation. Through the influence of this Association, uniform and higher standards of education have been adopted from time to time; and the fact that several States by law or by Board ruling recognize the standards of the Association is evidence of its influence.

The school is registered in the New York Department of Education, and its diploma is recognized in all States.

Requirements for Admission

The applicant must have completed a four-year standard high school course or its equivalent. A minimum age of seventeen years is demanded except when the candidate is a graduate of an accredited high school or of an institution of equal grade.

Admission to the course in pharmacy is by certificate issued by the Registrar of the University of Maryland, Lombard and Greene Streets, Baltimore, Md. The certificate is issued on the basis of credentials, or by examination, or by both. Evaluation of credentials can be made only by the Registrar, and all applicants, whether their entrance qualifications are clearly satisfactory as per the requirements for matriculation, outlined above, or not, must secure a certificate from the Registrar to be presented to the School of Pharmacy before they can be matriculated.

Applicants should secure an application blank for entrance from the Registrar of the University or from the office of the School of Pharmacy, and return it properly executed at the earliest possible date. Diplomas or certificates need not be sent. The Registrar will secure all credentials desired after the application blank has been received, and the applicant will be notified of the result of the investigation.

Applicants whose credentials do not meet the requirements must pass a satisfactory examination in appropriate subjects given by a recognized College Entrance Examination Board, to make up the required number of units. A fee is charged for these examinations.

Credit will be given for first-year pharmaceutical subjects to those students coming from schools of pharmacy holding membership in the American Association of Colleges of Pharmacy, provided they present a proper certificate of the satisfactory completion of such subjects and meet the entrance requirements of this school. Credit for general educational subjects will be given to those students presenting evidence of having completed work of equal value.

Requirements for Graduation

1. The candidate must possess a good moral character.

2. He must have completed successfully the work specified in the first three years of the course if a candidate for the Graduate in Pharmacy (Ph.G.) diploma; or four years if a candidate for the degree of Bachelor of Science in Pharmacy. In either case the last year must be taken in this school.

Matriculation and Registration

The Matriculation Ticket must be procured from the office of the School of Pharmacy, and must be taken out before entering the classes. All students after matriculation are required to register at the Office of the Registrar. The last date of matriculation is October 8th, 1928.

Expenses

Matriculation	*Tuition* *Resident—Non-Resident*	*Laboratory*	*Graduation*
$10.00 (only once)	$200.00 $250.00	$20.00 (yearly)	$10.00

Tuition for the first semester and breakage fee shall be paid to the Comptroller at the time of registration; and tuition for the second semester and graduation fee (returned in case of failure) on or before February 2, 1929.

A bulletin giving details of the course in Pharmacy may be obtained by addressing the School of Pharmacy, University of Maryland, Baltimore, Maryland.

STATE BOARD OF AGRICULTURE

816 Fidelity Building, Baltimore, Maryland.

The law provides that the personnel of the State Board of Agriculture shall be the same as the Board of Regents of the University of Maryland. The President of the University is the Executive Officer of the State Board of Agriculture.

General Powers of Board: The general powers of the Board as stated in Article 7 of the Laws of 1916, Chapter 391, are as follows:

"The State Board of Agriculture shall investigate the conditions surrounding the breeding, raising, and marketing of livestock and the products thereof, and contagious and infectious diseases affecting the same; the raising, distribution, and sale of farm, orchard, forest, and nursery products, generally, and plant diseases and injurious insects affecting the same; the preparation, manufacture, quality analysis, inspection, control, and distribution of animal and vegetable products, animal feeds, seeds, fertilizers, agricultural lime, agricultural and horticultural chemicals, and biological products; and shall secure information and statistics in relation thereto and publish such information, statistics, and the results of such investigations at such times and in such manner as to it shall seem best adapted to the efficient dissemination thereof; and except where such powers and duties are by law conferred or laid upon other boards, commissions, or officials, the State Board of Agriculture shall have general supervision, direction, and control of the herein recited matters, and generally of all matters in any way affecting or relating to the fostering, protection, and development of the agricultural interests of the State, including the encouragement of desirable immigration thereto, with power and authority to issue rules and regulations in respect thereof not in conflict with the Constitution and Laws of the State or the United States, which shall have the force and effect of law, and all violations of which shall be punished as misdemeanors are punished at common law; and where such powers and duties are by law conferred or laid on other governmental agencies may co-operate in the execution and performance thereof, and when so co-operating each shall be vested with such authority as is now or may hereafter by law be conferred on the other. The powers and duties herein recited shall be in addition to and not in limitation of any power and duties which now are or hereafter may be conferred or laid upon said board."

Under the above authority and by special legislation, all regulatory work is conducted under the general authority of the State Board. This includes the following services:

LIVE STOCK SANITARY SERVICE

JAMES B. GEORGE, *Director.*

816 Fidelity Building, Baltimore, Maryland.

This service has charge of the regulatory work in connection with the control of disease among animals. It is authorized by law to control outbreaks of rabies, anthrax, blackleg, scabies, Johne's disease, contagious abortion, etc. This service is also charged, in co-operation with the U. S. Bureau of Animal Industry, with the eradication of bovine tuberculosis. The hog cholera control work, which is conducted in co-operation with federal authorities, is also conducted under the general jurisdiction of this service. Much of the laboratory work necessary in conjunction with the identification of disease among animals is done in the University laboratories at College Park.

STATE HORTICULTURAL DEPARTMENT

College Park, Maryland.

The State Horticultural Law was enacted in 1898. It provides for the inspection of all nurseries and the suppression of injurious insects and diseases affecting plants of all kinds. The work of the department is conducted in close association with the departments of Entomology and Pathology of the University. The regulatory work is conducted under the authority of the law creating the department as well as the State Board of Agriculture. For administrative purposes, the department is placed under the Extension Service of the University on account of the close association of the work. The officers of the department are:

E. N. Cory, State Entomologist
C. E. Temple, State Pathologist
T. B. Symons, Director of the Extension Service

FEED, FERTILIZER, AND LIME INSPECTION SERVICE

College Park, Maryland.

The Feed, Fertilizer, and Lime Inspection Service, a branch of the chemical department of the University, is authorized to enforce the State Regulatory Statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland. This work is conducted under the general direction of the chemical department in charge of Dr. Neil Gordon.

SEED INSPECTION SERVICE

College Park, Maryland

The Seed Inspection Service is placed by law under the general supervision of the Maryland Experiment Station. This service takes samples of seed offered for sale, and tests them for quality and germination. Mr. F. S. Holmes is in immediate charge of the seed work, with Dr. H. J. Patterson, Director of the Experiment Station.

ASSOCIATED STATE DEPARTMENTS

STATE DEPARTMENT OF FORESTRY

The Department of Forestry was created and organized to protect and develop the valuable timber and tree products of the State, to carry on a campaign of education, and to instruct counties, towns, corporations, and individuals as to the advantages and necessity of protecting from fire and other enemies the timber lands of the State. While the power of the Forestry Department rests with the Regents of the University, acting through the Advisory Board, the detail work is in the hands and under the management of the State Forester, who is secretary of the Board; and all correspondence and inquiries should be addressed to him at 1411 Fidelity Building, Baltimore.

Scientific Staff:

F. W. Besley, State Forester.....Baltimore
Karl E. Pfeiffer, Assistant State Forester.....Baltimore
John R. Curry, Assistant Forester.....Baltimore
Fred B. Trenk, Assistant Forester.....College Park

Studies have been made of the timber interests of each of the twenty-three counties; and the statistics and information collected are published for free distribution, accompanied by a valuable timber map. The Department also administers six state forests, comprising about 5,000 acres. The Roadside Tree Law directs the Department of Forestry to care for those trees growing within the right-of-way of any public highway in the State. A State forest nursery, established in 1914 and located at College Park, is under the jurisdiction of this Department.

STATE WEATHER SERVICE

The State Weather Service continues its work of compilation of local statistics regarding climatic conditions and in the dissemination of information regarding the climatology of Maryland under the Regents of the University of Maryland through the State Geologist as successor to the Maryland State Weather Service Commission. The State Geologist is ex-officio Director, performing all the functions of former officers with the exception of Meterologist, who is commissioned by the Governor and serves as liaison officer with the United States Weather Bureau. All activities except clerical are performed voluntarily. The officers are:

Edward B. Mathews, Director.....Baltimore
Roscoe Nunn, Meterologist, U. S. Custom House.....Baltimore

THE STATE GEOLOGICAL AND ECONOMIC SURVEY

The Geological and Economic Survey Commission is authorized under the general jurisdiction of the Board of Regents of the University of Maryland

to conduct the work of this department. The State Geological and Economic Survey is authorized to make:

Topographic surveys showing the relief of the land, streams, roads, railways, houses, etc.

Geological surveys showing the distribution of the geological formations and mineral deposits of the State.

Agricultural soil surveys showing the areal extent and character of the different soils.

Hydrographic surveys to determine the available waters of the State for potable and industrial uses.

Magnetic surveys to determine the variation of the needle for land surveys.

A permanent exhibit of the mineral wealth of the State in the old Hall of Delegates at the State House, to which new materials are constantly added to keep the collection up-to-date.

The following is the staff of the Survey:

Edward B. Mathews, State Geologist.....Baltimore
Edward W. Berry, Assistant State Geologist.....Baltimore
Charles K. Swartz, Geologist.....Baltimore
Joseph T. Singewald, Jr., Geologist.....Baltimore
Myra Ale, Secretary.....Baltimore
Grace E. Reed, Librarian.....Baltimore
Eugene H. Sapp, Clerk.....Baltimore

SECTION III.
Description Of Courses

The courses of instruction described in this section are offered at College Park. Those offered in the Baltimore Schools are described in the separate announcements issued by the several schools.

For the convenience of students in making out schedules of studies, the subjects in the following Description of Courses are arranged alphabetically:

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Courses for undergraduates are designated by the numbers 1-99; courses for advanced undergraduates and graduates, 100-199; courses for graduate students, 200-299.

The letter following the number of the course indicates the semester in which the course is offered: thus, 1 f is offered the first semester; 1 s, the second semester; 1 y, the year. A capital S after a course number indicates that the course is offered in the summer session only.

The number of hours' credit is shown by the arabic numeral in parenthesis after the title of the course.

A separate schedule of courses is issued each semester, giving the hours, places of meeting, and other information required by the student in making out his schedule. Students will obtain these schedules when they register.

Students are advised to consult the statements of the colleges and schools in Section II when making out their programs of studies; also "Regulation of Studies," Section I.

AGRICULTURAL ECONOMICS

PROFESSOR DEVAULT; ASSISTANT PROFESSOR BENNETT.

A. E. 1 f. *Agricultural Industry and Resources* (3)—Two lectures; one laboratory. Open to Sophomores.

A descriptive course dealing with agriculture as an industry and its relation to physiography, movement of population, commercial development, transportation, etc.; the existing agricultural resources of the world and their potentialities, commercial importance, and geographical distribution; the chief sources of consumption; the leading trade routes and markets for agricultural products.

A. E. 2 f. *Agricultural Economics* (3)—Three lectures. Prerequisite, Econ. 3 A s.

A general course in Agricultural Economics, with special reference to population trend, agricultural wealth, land tenure, farm labor, agricultural credit, the tariff, price movements, and marketing and co-operation.

A. E. 3 s. *Advertising Agricultural Products* (3)—Three lectures.

Methods of giving publicity to agricultural products held for sale, naming the farm, advertising mediums; trade marks and slogans, roadside markets, demand vs. competition, legal aspects of advertising, advertising costs and advertising campaigns.

A. E. 8 s. *Food Products Inspection* (1).

This course, arranged by the Department of Agricultural Economics in co-operation with the State Department of Markets and the United States Department of Agriculture, is designed to give students primary instruction in shipping point inspection of fruits and vegetables. As a part of the work it is planned to give each student an opportunity to participate in the actual inspection of car-lots of fruits and vegetables in Washington, D. C. Students are not guaranteed employment, but when there is need for the appointment of additional inspectors, such students as have made satisfactory ratings will be given preference.

For Advanced Undergraduates and Graduates

A. E. 101 s. *Transportation of Farm Products* (3)—Three lectures.

A study of the development of transportation in the United States, the different agencies for transporting farm products, with special attention to such problems as tariffs, rate structure, and the development of fast freight lines, refrigerator service, etc. (Bennett.)

A. E. 102 s. *Marketing of Farm Products* (3)—Three lectures. Prerequisite, Econ. 3 A s.

A complete analysis of the present system of transporting, storing, and distributing farm products and a basis for intelligent direction of effort in increasing the efficiency of marketing methods. (DeVault.)

A. E. 103 f. *Co-operation in Agriculture* (3)—Three lectures. Prerequisite, Econ. 3 A s.

Historical and comparative development of farmers' co-operative organizations; reasons for failure and essentials to success; present tendencies. (Bennett.)

A. E. 104 s. *Agricultural Finance* (3)—Three lectures *Agricultural Credit* requirements; institutions financing agriculture; financing specific farm organizations and industries. *Taxation* of various farm properties; burden of taxation on different industries; methods of taxation; proposals for tax reform. *Farm insurance*—fire, crop, livestock, and life insurance—how provided, benefits, and needed extension. (Bennett.)

A. E. 105 y. *Seminar* (1-3).

This course will consist of special reports by students on current economic subjects, and a discussion and criticism of the same by the members of the class and the instructor. (DeVault.)

A. E. 106 y. *Research Problems* (1-3).

With the permission of the instructor, students will work on any research problems in agricultural economics which they may choose, or a special list of subjects will be made up from which the students may select their research problems. There will be occasional class meetings for the purpose of reports on progress of work, methods of approach, etc. (DeVault.)

For Graduates

A. E. 201 y. *Special Problems in Agricultural Economics* (3).

An advanced course dealing more extensively with some of the economic problems affecting the farmer; such as land problems, agricultural finance, farm wealth, agricultural prices, transportation, and special problems in marketing and co-operation. (DeVault.)

A. E. 202 y. *Research and Thesis* (8)—Students will be assigned research work in Agricultural Economics under the supervision of the instructor. The work will consist of original investigation in problems of Agricultural Economics, and the results will be presented in the form of a thesis. (De Vault.)

AGRICULTURAL EDUCATION AND RURAL LIFE

PROFESSORS COTTERMAN, CARPENTER; MR. WORTHINGTON.

For Advanced Undergraduates and Graduates

AG. ED. 100 s. *Survey of Teaching Methods for Agricultural Students* (3)—Two lectures; one laboratory. Open to juniors and seniors; required of juniors in Agricultural Education. Prerequisite, Ed. 101. Cannot be counted toward major for advanced degree in Agricultural Education.

The nature of educational objectives, the class period, steps of the lesson plan, observation and critiques, type lessons, lesson planning, class management. (Cotterman.)

AG. ED. 101 y. *Teaching Secondary Vocational Agriculture* (8)—Three lectures; one laboratory the first semester. One seminar period and practicum work to be arranged the second semester. Practicum work may be arranged during the first semester. Prerequisites, Ag. Ed. 100; A. H. 1, 2; Dairy 1; Poultry 1; Soils 1; Agronomy 1, 2; Hort. 1, 11; F. Mech. 101, 104; A. E. 1; F. M. 2. Cannot be counted toward major for advanced degree in Agricultural Education.

Types of schools and classes; administrative programs; qualifications of teachers; day class instruction—objectives, selection of projects, project instruction, selection of content for group instruction, methods of class period;

evening class instruction; part-time class instruction; equipment and other administrative problems; unit courses; student projects; investigations; reports. (Cotterman.)

AG. ED. 102 s. *Rural Life and Education* (3)—Three lectures.

Ancient and foreign rural communities; evolution of American rural communities; rural social institutions; social and cultural measurements, standards of living; the analysis of rural communities; community and educational programs; problems in leadership; investigations; reports. This course is designed especially for persons who expect to be called upon to assist in shaping educational and other community programs for rural people. (Cotterman.)

AG. ED. 103 s. *Objectives and Methods in Extension Education* (3)—Three lectures.

Given under the supervision of the Extension Service, and designed to equip young men to enter the broad field of extension work. Methods of assembling and disseminating the agricultural information available for the practical farmer; administration, organization, supervision and practical details connected with the work of a successful county agent, club work and extension specialist. Student will be required to gain experience under the guidance of men experienced in the respective fields. Traveling expenses for this course will be adjusted according to circumstances, the ability of the man, and the service rendered. (Cotterman and Extension Specialists.)

AG. ED. 104 f. *Teaching Farm Shop in Secondary Schools* (1)—One lecture.

Objectives in the teaching of farm shop; contemporary developments; determination of projects; shop management; shop programs; methods of teaching; equipment; materials of instruction; special projects. (Carpenter.)

AG. ED. 105 f. *School and Rural Community Surveys* (2-5)—Credits determined by amount and character of work done. Two lectures.

The function of survey; typical surveys, their purposes and findings; types of surveys; sources of information; preparation of schedules; collection, tabulation, and interpretation of data. (Cotterman.) Not given in 1928-1929.

For Graduates

AG. ED. 201 S. *Special Problems in the Teaching of Vocational Agriculture* (3)—Summer Session only. Prerequisite, Ag. Ed. 101.

Analysis of the work of the supervisor; supervisory programs; policies; problems; contemporary developments; principles of supervision; investigations; reports. (Cotterman.)

AG. ED. 202 S. *Supervision of Vocational Agriculture* (3)—Summer session only. Prerequisite, Ag. Ed. 101.

Analysis of the work of the supervisor; supervisory programs; policies; problems; contemporary developments; principles of supervision; investigations; reports. (Cotterman.)

AG. ED. 204 s. *Seminar in Agricultural Education* (3).

Problems in the administration and organization of Agricultural Education—prevocational, secondary, collegiate, and extension; individual problems and papers; current literature. (Cotterman.)

ED. 202 f. *College Teaching* (3).

ED. 205 s. *Problems in Higher Education* (3).

(See History and Principles of Education.)

AGRONOMY

Division of Crops

PROFESSORS METZGER, KEMP; ASSISTANT PROFESSOR EPPLEY.

AGRON. 1 f. *Cereal Crop Production* (3)—Two lectures; one laboratory.

History, distribution, adaptation, culture, improvement, and uses of cereal, forage, pasture, cover, and green manure crops.

AGRON. 2 s. *Forage Crop Production* (3)—Two lectures; one laboratory.

Continuation of Agron. 1 f.

AGRON 3 s. *Grading Farm Crops* (2)—One lecture; one laboratory. Prerequisite, Agron. 1 and 2.

Market classifications and grades as recommended by the United States Bureau of Markets, and practice in determining the grades.

AGRON. 4 f. *Grain and Hay Judging, Identification and Judging of Farm Crops* (1)—One laboratory. Prerequisite, Agron. 1 and 2.

A study of the classification of farm crops; practice in judging the cereals for milling, seeding, and feeding purposes; and practice in judging hay.

AGRON. 5 s. *Tobacco Production* (2)—One lecture; one laboratory. Offered only in even years, 1928, 1930, etc.

This course takes up in detail the handling of the crop from preparation of the plant bed through marketing, giving special attention to Maryland types of tobacco.

AGRON. 9 y. *Research and Thesis* (4).

Students are given a chance to do investigation work either in collecting information or in solving some problem in the laboratory, field, or greenhouse.

For Advanced Undergraduates and Graduates

AGRON. 103 f. Crop Breeding (2)—One lecture; one laboratory. Prerequisite, Gen. 101.

The principles of breeding as applied to field crops and methods used in crop improvement. (Kemp.)

AGRON. 120 s. *Cropping Systems and Methods* (2)—Two lectures. Prerequisites, Agron. 1 and Soils 1.

Principles and factors influencing cropping systems in the United States; study of rotation experiments; theories of cropping methods; and practice in arranging type farming systems. (Metzger.)

AGRON. 121 s. *Methods of Crop and Soil Investigations* (2)—One lecture; one laboratory.

A consideration of crop investigation methods at the various experiment stations, and the standardization of such methods. (Metzger.)

The seminar is devoted largely to reports by students on current scientific publications dealing with problems in crops and soils.

For Graduates

AGRON. 201 y. *Crop Breeding*—Credits determined by work accomplished.

The content of this course is similar to that of the undergraduate course in crop breeding, but will be adapted more to graduate students, and more of a range will be allowed in choice of material to suit special cases. (Kemp.)

AGRON. 203 y. *Seminar* (2)—One report period each week.

AGRON. 209 y. *Research*—Credits determined by work accomplished.

With the approval of the head of the department the student will be allowed to work on any problem in agronomy, or he will be given a list of suggested problems from which he may make a selection. (Staff.)

Division of Soils

PROFESSORS BRUCE, ERDMAN.

SOILS 1 s. *Principles of Soil Management* (3)—Two lectures; one quiz; one laboratory. Prerequisite, Geol. 101.

A study of the physical, chemical, and biological principles underlying the formation and management of soils. The relation of mechanical composition, classification, moisture, temperature, air, organic matter, and tillage are considered. The use and value of commercial plant nutrients, green and stable manure and of lime are discussed.

SOILS 2 f. *Fertilizers and Manures* (3)—Two lectures; one laboratory, Prerequisite, Soils 1.

This course includes a study of the nature, properties, and use of fertilizers; the source and composition of fertilizer materials; and the principles underlying the mixing of commercial plant-food. A study is made of the production, value, and uses of animal and vegetable manures. The practical work includes special studies of the effect of fertilizers and manures on the crop-producing power of the various soil types.

SOILS 3 s. *Soil Fertility* (3)—Two lectures; one laboratory. Prerequisites, Soils 1 and 2.

A study of the soil fertility systems of the United States, with special emphasis on the inter-relation of total to available plant food, the balance

of nutrients in the soil with reference to various cropping systems, and the economic and national aspect of permanent soil improvement. The practical work includes a resume of the important fertility studies and laboratory and greenhouse practice in soil improvement.

SOILS 5 f. *Soil Surveying and Classification* (3)—One lecture; two laboratories. Prerequisite, Soils 1.

A study of the principal soil regions, series, and types of the United States, and especially of the soils of Maryland, as to formation, composition, and agricultural value. The practical work includes a field survey, identification of soil types, and map-making.

SOILS 7 y.—Thesis (4-8).

Some special problem is assigned to each student, who is expected to embody the results of the investigation in a thesis.

For Graduate Students

SOILS 201 y. *Special Problems and Research* (10-12).

Original investigation of problems in soils and fertilizers. (Staff.)

SOILS 202 y. *Soil Technology* (7—4 f, 3 s)—Two lectures; two laboratories first semester; two lectures; one laboratory second semester. Prerequisites, Geology 1, Soils 1, and Chemistry 1.

In the first semester chemical and physico-chemical study of soil problems as encountered in field, greenhouse, and laboratory. In the second semester physical and plant nutritional problems related to the soil. (Erdman.)

SOILS 104 s. *Soil Micro-Biology* (3)—Two lectures; one laboratory. Prerequisite, Bact. 1.

A study of the micro-organisms of the soil in relation to fertility. It includes the study of the bacteria of the soil concerned in the decomposition of organic matter, nitrogen fixation, nitrification, sulphur oxidation and reduction, and deals also with such organisms as fungi, algae, and protozoa.

The course includes a critical study of the methods used by Experiment Stations in soil investigational work. (Erdman.)

ANIMAL HUSBANDRY

PROFESSORS MEADE, CARMICHAEL; ASSISTANT PROFESSOR HUNT.

A. H. 1 f. *General Animal Husbandry* (3)—Two lectures; one laboratory.

Place of livestock in the farm organization. General principles underlying efficient livestock management. Brief survey of breeds, types, and market classes of livestock, together with an insight into our meat supply.

A. H. 2 f. *Feeds and Feeding* (3)—Two lectures; one laboratory.

Elements of nutrition, source, characteristics, and adaptability of the various feeds to the several classes of livestock. Feeding standards, the calculation and compounding of rations.

A. H. 3 s. *Principles of Breeding* (3)—Two lectures; one laboratory.

This course covers the practical aspects of animal breeding, including heredity, variation, selection, development, systems of breeding, and pedigree work.

A. H. 4 s. *Swine Production* (3)—Two lectures; one laboratory. Not offered in 1929-1930.

The care, feeding, breeding, management, and judging of swine, and the economics of the swine industry.

A. H. 5 f. *Beef Production* (2)—Two lectures; one laboratory.

The care, feeding, breeding, management of beef herds, fattening, and the economics of the beef industry.

A. H. 6 s. *Horse and Mule Production* (2)—One lecture; one laboratory.

The care, feeding, breeding, and management of horses. Market classes and grades and judging.

A. H. 7 s. *Sheep Production* (3)—Two lectures; one laboratory. Not offered in 1928-29.

Care, feeding, breeding, and management of the farm flock. Judging of sheep and the grading of wool.

A. H. 8 f. *Meat and Meat Products* (2)—Two laboratories.

The slaughtering of meat animals and the production, preparation, and curing of meat and meat products.

A. H. 9-10 y. *Advanced Judging* (2)—One laboratory.

First Semester—The comparative and competitive judging of sheep and swine.

Second Semester—The comparative and competitive judging of horses and beef cattle. Trips to various stock farms throughout the state will be made. Such judging teams as may be chosen to represent the university will be selected from among those taking this course.

A. H. 11 s. *Markets and Marketing* (3)—Two lectures; one laboratory.

History and development, organization and status of the meat, wool, and horse industries. Market classes and grades of livestock. American livestock markets and how they function.

A. H. 12 y. *Research and Thesis* (4-6).

Work to be done by assignment and under supervision. Original investigation in problems in animal husbandry, the results of which research are to be presented in the form of a thesis, a copy of which must be filed in the department library.

For Advanced Undergraduates and Graduates

A. H. 101 s. *Nutrition* (3)—Two lectures; one laboratory. Senior year.

A study of digestion, assimilation, metabolism, and protein and energy requirements. Methods of investigation and studies in the utilization of feed and nutrients. (Meade.)

A. H. 102 y. *Seminar* (2)—One lecture. Senior and graduate students only. Students are required to prepare papers based upon current scientific publications relating to animal husbandry or upon their research work for presentation before and discussion by the class. (Staff.)

For Graduates

A. H. 201 y. *Research*—Credit to be determined by the amount and character of work done. With the approval of the head of the department, students will be required to pursue original research in some phase of animal husbandry, carry the same to completion, and report the results in the form of a thesis. (Staff.)

ASTRONOMY

PROFESSOR T. H. TALIAFERRO.

ASTR. 1 f or s. *Astronomy* (3)—Three lectures. Elective.

An elementary course in descriptive astronomy. Open only to juniors and seniors.

BACTERIOLOGY

PROFESSORS PICKENS, REED; ASSISTANT PROFESSORS WELSH, POELMA; MR. WHEATON, MR. FABER.

BACT. 1 f. *General Bacteriology* (3)—Repeated second semester. One lecture; two laboratories. Sophomores.

A brief history of bacteriology; microscopy, bacteria and their relation to nature; morphology, classification; preparation of cultural media; sterilization and disinfection; microscopic and macroscopic examination of bacteria; classification, composition, and uses of stains; isolation, cultivation, and identification of aerobic and anaerobic bacteria; vital activities of bacteria.

BACT. 2 s. *General Bacteriology* (3)—One lecture; two laboratories.

Continuation of Bact. 1. Application of Bacteriology to water, milk, foods, soil, and air; Pathogens and Immunity.

BACT. 3 s. *Household Bacteriology* (3)—One lecture; two laboratories. Junior year.

A brief history of bacteriology, laboratory technique; care, preservation, and contamination of foods: Personal, home, and community hygiene.

BACT. 4 s. *Sanitary Bacteriology* (1)—One lecture. Senior year, for engineering students.

Application to water purification and sewage disposal.

For Advanced Undergraduates and Graduates

BACT. 101 y. *Dairy Bacteriology* (6)—One lecture; two laboratories. Juniors. Prerequisite, Bact. 1.

Historical sketch; relation of bacteria to dairy products; preparation of media; plating by dilution method; direct microscopic examination; kinds of bacteria in milk, and their development; pasteurization, by flash and hold methods; sources of contamination of milk; care of milk; abnormal milks; tests, and their relation to bacteria counts; fermented milks; bacteriological analysis of standard grades of milk and milk products; prepa-

ration of starters; requirements and standards for various grades of milk; public health requirements. (Poelma.)

BACT. 102 y. *Advanced Bacteriology* (3-10)—Juniors and seniors. Prerequisite, Bact. 1.

This course is intended primarily to give the student a chance to develop his own initiative. He will be allowed to decide upon his project and work it out as much as possible in his own way under proper supervision. In this manner he will be able to apply his knowledge of bacteriology to a given problem in that particular field in which he is interested. He will get to know something of the methods of research. Familiarity with library practices and current literature will be included. (Pickens.)

BACT. 103 s. *Hematology* (2)—Senior year. Prerequisite, Bact. 1.

Procuring blood; estimating the amount of hemoglobin; color index; examination of red cells and leucocytes in fresh and stained preparations; numerical count of erythrocytes and leucocytes; differential count of leucocytes; sources and development of the formed elements of blood; pathological forms and counts. (Wheaton.)

BACT. 104 f. *Serology* (2-3)—Junior or Senior year. Prerequisite, Bact. 2.

The theory and application of several serological tests, including the Compliment Fixation Reaction. (Poelma.)

BACT. 105 f. *Pathological Technique* (3)—Junior or Senior year. Prerequisite, Bact. 1.

Examination of fresh material; free hand sections; fixation; frozen sections; decalcification; celloidin and paraffin imbedding processes; sectioning; general and special standing processes. (Reed.)

BACT. 106 f. *Comparative Anatomy and Physiology* (3)—Three lectures. Junior year.

Structure of the animal body; abnormal as contrasted with normal. The interrelationship between the various organs and parts as to structure and function. (Reed.)

BACT. 107 s. *Urinalysis* (2)—Junior or Senior year. Prerequisite, Bact. 1. (Reed.)

BACT. 108 s. *Animal Hygiene* (3)—Three lectures or demonstrations. Senior year.

Care and management of domestic animals, with special reference to maintenance of health and resistance to disease. Prevention and early recognition of disease; general hygiene; sanitation; first aid. (Reed.)

BACT. 109 y. *Thesis* (4)—Senior year. Prerequisites, Bact. 1 and at least one of the advanced courses.

Investigation of given project, results of which are to be presented in the form of a thesis and submitted for credit toward graduation. (Pickens.)

BATC. 110 y. *Seminar* (2)—Senior year.

The work will consist of making reports on individual projects and on recent scientific literature. (Pickens and Staff.)

For Graduates

BACT. 201 y. *Research Bacteriology* (4-12—Prerequisites, Bact. 1 and in certain cases, Bact. 103, depending upon the project. (Pickens.)

BACT. 202 y. *Research in Genital Diseases of Farm Animals.* Prerequisite, Degree in Veterinary Medicine, from an approved Veterinary College. Laboratory and field work by assignment. (Reed.)

BOTANY

PROFESSORS NORTON, TEMPLE; MR. MOOK.

(For other Botanical Courses see Plant Physiology and Plant Pathology.)

BOT. 1 f or s. *General Botany* (4)—Two lectures; two laboratories.

General introduction to botany, touching briefly on all phases of the subject and planned to give the fundamental prerequisites for study in the special departments.

BOT. 2 s. *General Botany* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1.

A study of algae, bacteria, fungi, liverworts, mosses, ferns, and seed plants. The development of reproduction from the simplest form to the most complex; adjustment of plants to the land habit of growth; field trips to study the local vegetation; trips to the botanical gardens, parks, and greenhouses in Washington to study other plants of special interest. A cultural course intended also as foundational to a career in the plant sciences. (Temple.)

BOT. 3 s. *Systematic Botany* (2)—One lecture; one laboratory. Prerequisite, Bot. 1.

A study of the local flora. A study is made of floral parts and the essential relations between the groups of flowering plants. Students become familiar with the systematic key used to identify plants. Not offered in 1929-1930.

BOT. 4 s. *General Mycology* (2)—One lecture; one laboratory.

Introductory comparative study of the morphology, life history, and classification of economic fungi.

For Advanced Undergraduates and Graduates

BOT. 101 f. *Plant Anatomy* (3)—One lecture; two laboratories. Not offered in 1928-1929.

A study of the structures of roots, stems, leaves, flowers, and fruits; the origin and development of organs and tissue systems in vascular plants. (Temple.)

BOT. 102 f. *Methods in Plant Histology* (3)—One lecture; two laboratories. Prerequisite, Bot. 1.

Primarily a study in technique. It includes methods of the killing, fixing, imbedding, sectioning, staining, and mounting of plant materials. (Temple.)

BOT. 103 f or s. *Advanced Taxonomy* (3)—One lecture; two laboratories. Prerequisite, Bot. 1. Not offereed in 1928-1929.

The course is offered for students who want more proficiency in systematic botany than the elementary course affords. A student who completes the course should be able to classify the grasses and other common plants of the state. (Norton.)

BOT. 105 s. *Economic Botany* (3)—One lecture; two laboratories.

The names, taxonomic position, native and commercial geographic distribution, and use of the leading economic plants of the world are studied. By examination of plant products in markets, stores, factories, and gardens, students become familiar with the useful plants both in the natural form and as used by man. (Norton.)

For Graduates

BOT. 202. *Special Studies of Fungi*—Credit hours according to work done. Prerequisite, Bot. 103.

Special problems in the structure or life history of fungi or the monographic study of some group of fungi.

BOT. 203. *Special Plant Taxonomy*—Credit hours according to work done. Prerequisite, Bot. 103.

Original studies in the taxonomy of some group of plants.

CHEMISTRY

PROFESSORS GORDON, BROUGHTON, KHARASCH, DRAKE;
ASSOCIATE PROFESSORS HARING, WILEY;
ASSISTANT PROFESSOR WHITE; ASSISTANTS COOKE, HERD.

A. General Chemistry

CHEM. 1 A y. *General Chemistry and Qualitative Analysis* (8)—Two lectures; two laboratories.

A study of the non-metals and metals, the latter being studied from a qualitative standpoint. One of the main purposes of the course is to develop original work, clear thinking, and keen observation. This is accomplished by the unit-study method of teaching.

Course A is intended for students who have never studied chemistry, or have passed their high-school chemistry with a grade of less than B.

CHEM. 1 B y. *General Chemistry and Qualitative Anaylsis* (8)—Two lectures; two laboratories.

This course covers much the same ground as Chemistry 1 A y, except that the subject matter is taken up in more detail with emphasis on chemical theory and important generalization. The laboratory work deals with fundamental principles, the preparation and purification of compounds, and a systematic qualitative analysis of the more common metals and acid radicals.

Course B is intended for students who have passed an approved high-school chemistry course, with a grade of not less than B.

CHEM. 2 y. *Qualitative Analysis* (8)—Two lectures; two laboratories. Prerequisite, Chem. 1 y.

A study of the reactions of the common metals and the acid radicals, their separation and identification, and the general underlying principles. During the second semester, the nature, preparation, and behavior of colloidal substances are studied.

For Advanced Undergraduates and Graduates

CHEM. 100 y. *Advanced Inorganic Chemistry* (6)—Two lectures; one laboratory. Prerequisite, 6 y.

A study of the rarer elements is made by comparing their properties with those of the more common elements. The course is based upon the periodic system, the electromotive series, and the electronic structure of matter. The laboratory is devoted to the preparation of pure, inorganic substances. (White.)

For Graduates

CHEM. 201 y. *Research In Inorganic Chemistry* (12)—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (White.)

B. Analytical Chemistry

CHEM. 3 y. *Chemical Calculations* (2)—One lecture. Prerequisite, Chem. 1 y.

Chemical problems relating to analytical chemistry.

CHEM. 4 s. *Quantitative Analysis* (3)—Three laboratories. Prerequisite, Chem. 1 y.

Quantitative analysis for premedical students with special reference to volumetric methods.

CHEM. 5 y. *Determinative Mineralogy and Assaying* (4)—One lecture; one laboratory. Prerequisite, Chem. 1 y.

The more important minerals are identified by their characteristic physical and chemical properties. Assays of gold, silver, copper, and lead are made.

CHEM. 6 y. *Quantitative Analysis* (10)—One lecture; four laboratories. Prerequisite, Chem. 1 y.

The principal operations of gravimetric analysis. Standardization of weights and apparatus used in chemical analysis. The principal operations of volumetric analysis. Study of indicators, and of typical volumetric and colorimetric methods. Required of all students majoring in chemistry.

CHEM. 7 y. *Analytical Chemistry* (10)—Two lectures; three laboratories. Prerequisite, Chem. 1 y.

This course includes the principal theories and operations of both qualitative and quantitative analysis. It is especially designed for industrial chemistry students.

For Advanced Undergraduates and Graduates

CHEM 101 y. *Advanced Quantitative Analysis* (10)—Two lectures; three laboratories. Prerequisite, Chem. 6 y or its equivalent.

A broad survey of the field of inorganic quantitative analysis. In the first semester mineral analysis will be given. Included in this will be analysis of silicates, carbonates, etc. In the second semester the analysis of steel and iron will be taken up. However, the student will be given wide latitude as to the type of quantitative analysis he wishes to pursue during the second semester. (Wiley.)

C. Organic Chemistry

CHEM. 8 y. *Elementary Organic Chemistry* (8)—Two lectures; two laboratories. Prerequisite, Chem. 1 y.

The course is devoted to a study of the behavior of fundamental types or organic compounds from the standpoint of the electronic conception of valence.

The course is so balanced as to meet the needs of students specializing in chemistry and also premedical students.

For Advanced Undergraduates and Graduates

CHEM. 116 f. *Organic Chemistry* (3)—Three lectures. Prerequisite, Org. Chem. 8 y or its equivalent. Consent of the instructor.

An intensive course of three lectures per week devoted to an interpretation of the chemistry and mechanism of reaction of aliphatic and aromatic substances from the standpoint of electronic conception of valence. This course is a prerequisite for other advanced courses in organic chemistry. (Kharasch.)

For Graduates

Organic Chemistry 8 y. is required of all students taking graduate work in organic chemistry.

CHEM. 202 y. *Advanced Organic Chemistry* (8)—Two lectures; two laboratories.

A more advanced treatment of the aliphatic and aromatic compounds, with special emphasis on the most recent theories of structure of organic compounds in the light of the modern conception of matter. (Kharasch.)

CHEM. 203 s. *Identification of Organic Compounds* (5)—Five laboratories. Prerequisites, Chem. 202 y and consent of instructor.

A systematic study of methods of identifying organic compounds. A thorough review of the most important chemical and physical properties of the fundamental types of organic compounds; methods of separating organic mixtures, etc. (Kharasch.)

CHEM. 204 f or s. *Elementary Organic Analysis (Combustions)* (3)—One lecture; two laboratories. (Kharasch.)

CHEM. 205 f. *Organic Preparations* (4)—One lecture; three laboratories.

Eight hours of work in organic preparations are essential before a student is eligible for research. The laboratory work consists in preparing compounds described in the literature. No textbook. (Kharasch.)

CHEM. 206 s. *Color in Relation to Chemical Constitution* (1)—One lecture. Prerequisites, Chem. 201 and consent of instructor.

A discussion of theory of quinoidation, colors in dye-stuffs, colors of second order, etc. (Kharasch.)

Chem. 207 s. *Carbohydrates* (1)—One lecture. Prerequisites, Chem. 8 and consent of the instructor. (Kharasch.)

CHEM. 208. *Synthetic Drugs* (3)—One lecture; two laboratories. Prerequisites, Chem. 202 and consent of instructor. (Kharasch.)

CHEM. 209 s. *Selected Topics in Organic Chemistry* (2)—Two lectures. Consent of instructor.

Discussion of the theories of tautomerism, electromerism, molecular rearrangements, etc. (Kharasch).

CHEM. 210. *Research in Organic Chemistry.* (Kharasch.)

D. Physical Chemistry

CHEM. 10 y. *Elementary Physical Chemistry* (6)—Two lectures; one laboratory. Prerequisites, Chem. 1 y; Physics 1 y; Math. 3 y.

This course reviews the more theoretical points of inorganic chemistry from an advanced standpoint, prepares the way for an extensive treatment of physical chemistry, and furnishes an elementary treatment of the subject for those who cannot pursue it further.

For Advanced Undergraduates and Graduates

CHEM. 102 f. *Physical Chemistry* (4)—Two lectures; two laboratories. Prerequisites, Chem. 6 y; Physics 2 y; Math. 6 s.

The gas laws (kinetic theory, liquids, solutions, elementary thermodynamics and thermochemistry, colloids, etc.). (Haring.)

CHEM. 103 s. *Physical Chemistry* (4)—Two lectures; two laboratories. Prerequisite, Chem. 102 f.

A continuation of Chem. 102. Equilibrium, chemical kinetics, electrolytic conductivity, electromotive chemistry, structure of matter, etc. (Haring.)

For Graduates

CHEM. 102 and 103 or the equivalents are prerequisite for all the following courses.

CHEM. 212 y. *Colloid Chemistry* (6)—Two lectures; one laboratory.

Special topics will be taken up with the emphasis placed on the most recent theories and research going on in colloid chemistry at the present time. (Not given 1928-1929.) (Gordon.)

CHEM. 213 f. *The Phase Rule* (2)—Two lectures.

A systematic study of heterogeneous equilibria. One, two, and three component systems will be considered with practical applications of each. (Haring.)

CHEM. 214 s. *Structure of Matter* (2)—Two lectures.

Subjects considered will be radioactivity, isotopes, the Bohr and Lewis-Langmuir theories of atomic structure, and allied topics. (Haring.)

CHEM. 215 f. *Catalysis* (2)—Two lectures.

This course will consist of lectures on the theory and use of catalysis in various reactions. (Not given in 1928-1929.) (Haring.)

CHEM. 216 s. *Theory of Solutions* (2)—Two lectures.

A detailed study will be made of the modern theory of ideal solutions, the theory of electrolytic dissociation, anomaly of strong electrolytes, etc. (Not given 1928-1929.) (Haring.)

CHEM. 217 f. *Electrochemistry* (2 or 4)—Two lectures; or two lectures and two laboratories.

The principles of electrochemistry. Subjects considered will be the theory of ionization, migration of ions, electro-motive force, cells of various types, polarization, ionic equilibria both homogeneous and heterogeneous, theory of indicators, etc. (Haring).

CHEM. 218 s. *Electrochemistry* (2)—Two lectures.

The practical applications of electrochemistry. Batteries both primary and secondary, electrodeposition, and electrothermics will be discussed. (Haring.)

CHEM. 219 y. *Research in Physical Chemistry* (12)—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (Haring.)

E. Agricultural and Food Chemistry

CHEM. 12 f. *Elements of Organic Chemistry* (4)—Three lectures; one laboratory. Prerequisite, Chem. 1 y.

The chemistry of carbon and its compounds. This course is particularly designed for students in Agriculture and Home Economics.

CHEM. 13 s. *Agricultural Chemical Analysis* (3)—One lecture; two laboratories. Prerequisite, Chem. 1 y.

An introductory course in the analysis of agricultural products with special reference to the analysis of feeding stuffs, soils, fertilizers, and insecticides.

CHEM. 14 f. *Chemistry of Foods* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f.

The purpose of this course is to present the principles of chemistry as applied to foods and nutrition with especial reference to the fats, carbohydrates, proteins, enzymes, etc.

CHEM. 15 s. *Chemistry of Textiles* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f.

A study of the principal textile fibres, their chemical and mechanical structure. Chemical methods are given for identifying the various fibres and for a study of dyes and mordants.

For Advanced Undergraduates and Graduates

CHEM. 104 f. *General Physiological Chemistry* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f, or its equivalent.

A study of the chemistry of the fats, carbohydrates, proteins, and other compounds of biological importance. This course is intended for students majoring in biological subjects, and as a prerequisite to certain advanced courses in this department. (Broughton.)

CHEM. 105 y. *Food Inspection and Analysis* (8)—Lectures and laboratory to be assigned. Prerequisites, Chem. 12 f, 13 s, or acceptable courses in organic chemistry and quantitative analysis.

Lectures on the composition of foods, methods of analysis, and the detection of adulteration in foods. Laboratory work includes the analysis of cereal-foods, the use of the microscope in the detection of adulterants in spices, the identification of added colors, and the detection and determination of chemical food preservatives. Analysis of edible fats and oils, sugars and syrups, vinegars, flavoring extracts, and beverages.

This course is designed to give preparation for the analytical work connected with the state control of the sale of foods. (Broughton.)

CHEM. 106 f or s. *Dairy Chemistry* (4)—One lecture; three laboratories. Prerequisite, Chem. 12 f.

Lectures and assigned reading on the constituents of dairy products. This course is designed to give the student a working knowledge and laboratory practice in dairy chemistry and analysis. Practice is given in examining dairy products for confirmation under the food laws, detection of watering, detection of preservatives and added colors, and the detection of adulterants. Students showing sufficient progress may take the second semester's work, and elect to isolate and make complete analysis of the fat or protein of milk. (Broughton.)

CHEM. 107 f or s. *Tissue Analysis* (3)—Three laboratories. Prerequisite, Chem. 12 f. or its equivalent.

A discussion and the application of the analytical methods used in determining the inorganic and organic constituents of live tissue. (Broughton.)

CHEM. 108 s. *Soils and Fertilizer Analysis* (3)—Three laboratories. Prerequisite, Chem. 12 f.

A complete analysis of soils and fertilizers with training in the more refined analytical procedures as applied. (Broughton.)

CHEM. 109 s. *Chemistry of Nutrition* (4)—Two lectures; two laboratories. Prerequisite, Agricultural Chemistry 104 f, or its equivalent.

Lectures on the chemistry of nutrition, laboratory determination of fuel value of food and the heat production of man under various conditions, metabolism, the effects on small animals of diets consisting of purified food constituents, and the effects of selected diets on the formation of waste products in the body. (Broughton.)

CHEM. 115 f or s. *Organic Analysis* (4)—One lecture; three laboratories. Prerequisites, Chem. 1 y, 6 y, and 8 y.

This course gives a connected introductory training in organic analysis, especially as applied to plant and animal substances and their manufactured products. The greater part of the course is devoted to quantitative methods for food materials and related substances. Standard works and the publications of the Association of the Official Agricultural Chemists are used freely as references. (Broughton.)

For Graduates

CHEM. 220 f or s. *Special Problems* (4 to 8)—A total of eight credit hours may be obtained in this course by continuing the course for two semesters. Laboratory, library, and conference work amounting to ten hours each week. Prerequisites, Chem. 104 f and consent of instructor.

This course consists of studies of special methods such as the separation of the fatty acids from a selected fat, the preparation of certain carbohydrates or amino acids, and the determination of the distribution of nitrogen in a protein. The students will choose, with the advice of the instructor, the particular problem to be studied. (Broughton.)

CHEM. 221 f or s. *Research* (5 to 10)—Agricultural chemical problems will be assigned to graduate students who wish to gain an advanced degree. (Broughton.)

CHEM. 226 y. *Agricultural Chemical Seminar* (2).

During these periods there is a discussion of the latest bulletins and scientific papers on all phases of agricultural chemistry by the graduate students and chemistry staff. Required of seniors and graduates.

F. Industrial Chemistry

For Advanced Undergraduates and Graduates

CHEM. 110. *Industrial Chemistry* (6)—Three lectures. Prerequisites, Chem. 6 y and 8 y.

A study of the principal chemical industries; factory inspection, trips and reports; the preparation of a thesis on some subject of importance in the chemical industries. (Drake.)

CHEM. 111 y. *Engineering Chemistry* (2)—One lecture. A course for engineering students.

A study of water, fuels and combustion, the chemistry of engineering materials, etc. Problems typical of engineering work. (Drake.)

CHEM. 112 f. *Gas Analysis* (4)—One lecture; three laboratories. Prerequisite, Chem. 6 y.

An experimental study of the methods of determining quantitatively the common gases. Flue gas analysis and its significance. (Drake).

CHEM. 113 (Summer). *Unit Processes of Chemical Engineering* (3)—Three Lectures. Prerequisite, consent of instructor.

A theoretical discussion of evaporation, distillation, filtration, etc. Problems. (Drake.)

CHEM. 114 f. *Chemical Thermodynamics* (3)—Three lectures. Prerequisite, consent of instructor.

A mathematical treatment of chemical phenomena. (Not given in 1928-1929.) (Drake.)

For Graduates

CHEM. 222 s. *Typical Methods of Dye Synthesis* (5)—Lectures and laboratory work. Prerequisite, consent of instructor.

A study of typical methods of preparation of different types of dyes. (Drake.)

CHEM. 223 y. *Research in Industrial Chemistry.* The investigation of special problems and the preparation of a thesis toward an advanced degree. (Drake.)

DAIRY HUSBANDRY

PROFESSOR MEADE; ASSISTANT PROFESSORS INGHAM, MUNKWITZ; MR. COTTER.

D. H. 1 s. *Farm Dairying* (3)—Two lectures; one laboratory.

Types and breeds of dairy cattle, the production and handling of milk on the farm, use of the Babcock test starters, cottage cheese, and farm butter-making.

D. H. 2 f. *Dairy Production* (3)—Two lectures; one laboratory.

Breeds of dairy cattle, their characteristics and adaptability. Methods of herd management, feeding and breeding operations, dairy herd improvement, and other factors concerned in the efficient and economical production of milk. Advanced registry requirements and dairy cattle judging.

D. H. 3 s. *Advanced Dairy Cattle Judging* (1)—One laboratory.

Comparative judging of dairy cattle. Trips to various leading dairy farms will be made. Such dairy cattle judging teams as may be chosen to represent the University will be selected from among those taking this course.

D. H. 4 y. *Dairy Manufacturing* (3)—One lecture; two laboratories.

Manufacture of butter, cheese, and ice cream, and the preparation of culture buttermilk. Study of cream separation, pasteurization, and processing of milk and cream. Refrigeration. The second semester work will be devoted largely to the study of ice-cream, and must be preceded by the work of the first semester.

D. H. 5 f. *Market Milk* (4)—Three lectures; one laboratory.

The course is so planned as to cover the commercial and economic phases of market milk, relating more particularly to cost of production and distribution, processing, milk plant construction and operation, sanitation, and merchandizing. Dairy farms and commercial dairy plants will be visited and their plans of construction, arrangement of equipment, and method of operation carefully studied.

D. H. 6 s. *Marketing and Grading of Dairy Products* (2)—One lecture; one laboratory.

Dairy marketing from the standpoint of producer, dealer, and consumer; market grades and the judging of dairy products.

D. H. 7 s. *Dairy Plant Technique* (2)—One lecture; one laboratory. Prerequisites, D. H. 2; Bact. 103; Chem. 121.

This course is designed to give students practice in the application of dairy technology. Commercial dairy laboratory tests will be made and their economic value as relates to the dairy industry studied.

D. H. 8 y. *Research and Thesis* (4-6)—This work to be done by assignment and under supervision. Opportunity will be given to study and summarize the data on some special problem or to carry on original investigations in problems in Dairy Husbandry. The results of such study or problems must be presented in the form of a thesis, a copy of which shall be filed in the department library.

For Advanced Undergraduates and Graduates

D. H. 101 s. *Advanced Breed Study* (2)—One lecture; one laboratory. Breed Association rules and regulations, important families and individuals, pedigree studies. Work largely by assignment. (Ingham.)

D. H. 102 s. *Advanced Dairy Manufacturing* (3)—Hours to be arranged as to lecture and laboratory. Prerequisite, D. H. 4.

Plant and laboratory management, storage problems. Study of costs of production, accounting systems, purchase of equipment and supplies, market conditions, relation of the manufacturer to the shipper and dealer.

In this course the student will be required to act as helper and foreman and will be given an opportunity to participate in the general management of the dairy plant. Visits will be made to nearby dairies and ice-cream establishments. (Munkwitz.)

D. H. 103 y. *Seminar* (2)—Students are required to prepare papers based upon current scientific publications relating to dairying or upon their research work for presentation before and discussion by the class. (Staff.)

For Graduates

D. H. 201 y. *Research.* Credit to be determined by the amount and quality of work done. Students will be required to pursue, with the approval of the head of the department, an original investigation in some phase of dairy husbandry, carry the same to completion, and report the results in the form of a thesis. (Staff.)

ECONOMICS AND SOCIOLOGY

PROFESSOR CARPENTER; ASSOCIATE PROFESSORS CADISCH, STEVENS; MR. DANIELS, MR. BELLMAN.

A. Economics

SOC. SCI. 1 y. *Elementary Social Sciences* (6)—Three lectures. Credit not given unless the full-year course is completed. An orientation course in Social Science. Open to Freshmen and Sophomores. If taken by Juniors or Seniors only two credits per semester will be granted.

This course deals with the basis and nature of society; the process of social evolution; the economic organization of society; the rise of government and law as institutions; and the nature and extent of social control of man's activities; problems of citizenship. It forms the foundation upon which the principles of economics, the principles of sociology, and the science of government are based.

ECON. 1 f. *History of World Commerce* (3)—Three lectures.

The development of commerce from the early ages until the present time. The rise and fall of commercial institutions and their economic reactions upon the social structure throughout history. Discoveries and inventions leading to the industrial revolution and the rise of the modern factory system. Post-war changes in the modern economic organization.

ECON. 2 s. *Economic Geography and Industry* (3)—Three lectures.

An examination of the principal geographical phenomena which form the basis of the economic life of man. The principal natural resources utilized in modern civilization; their distribution upon the surface of the earth in characteristic regions, the development of those regions industrially; routes of trade between the major producing regions.

ECON. 3 f or s. *Principles of Economics* (3)—Three lectures.

A study of the general principles of economics; production, exchange, distribution, and consumption of wealth.

ECON. 3 A s. *Principles of Economics* (3)—Three lectures. The general principles of economics offered for agricultural students.

ECON. 3 E f. *Principles of Economics* (3)—Three lectures. The general principles of economics adapted to the needs of engineering students.

ECON. 4 s. *Economic Problems* (3)—Three lectures.

A continuation of Economics 3 f, with emphasis on the study of modern economic problems. Among those discussed are the following: The business cycle, trusts, labor problems, railroads, banking reform, taxation, public ownership, socialism, social reform, and foreign commerce.

For Advanced Undergraduates and Graduates

ECON 101 f. *Money and Credit* (2)—Two lectures. Prerequisite, Econ. 3 f.

A study of the origin, nature, and functions of money, monetary systems, credit and credit instruments, prices, interest rates, and exchanges. (Cadisch.)

ECON. 102 s. *Banking* (2)—Two lectures. Prerequisite, Econ. 3 f. (Should be preceded by Econ. 101 f.)

Principles and practice of banking in relation to business, commercial banking, trust companies, savings banks, agricultural financial organizations, Federal Reserve system. (Cadisch.)

ECON. 103 f. *Investments* (3)—Three lectures. Prerequisite, Econ. 3 f.

Classes of securities, stocks and bonds, railroad, public utility, real estate securities, government, state, and municipal bonds, stock and bond houses, taxation of investments. (Cadisch.)

ECON 104 f. *Public Finance* (2)—Two lectures. Prerequisite, Econ. 3 f.

The nature of public expenditures, sources of revenue, the principles of taxation, an examination of types of taxes to determine their effects upon the individual and the community. Federal taxation in the United States, public credit, national debt, and budget of the United States. (Daniels.)

ECON. 105 f. *Business Organization and Operation* (3)—Three lectures. Prerequisite, Econ. 3 f.

A general survey of the principles of business organization and administration. Forms of organization, management of finances, of labor, of buying and selling. Credit as a factor in business. Elementary business analysis. (Stevens.)

ECON. 106 s. *Corporation Finance* (3)—Three lectures. Prerequisite Econ. 3 f. (Should be preceded by Econ. 105 f.)

Methods employed in the financial management of a business with especial reference to the problems of the moderate sized concern. The legal forms of organization; incorporation; internal organization; promotion; permanent capital; working capital; borrowing operations; customer and employee ownership; financial statements and their interpretation; budgeting; the business cycle; forecasting; consolidation; re-organization; prevention of manipulation by officers, directors, and stockholders. (Stevens.)

ECON. 107 f. *Business Law* (3)—Three lectures.

The aim of this course is to train students for practical business affairs by giving the legal information necessary to prevent common business errors. Some phases of the work are, requisites and forms of contracts and remedies for their breach; negotiable instruments, agency, partnership, corporations, real and personal property, sales, mortgages, and insurance. (Carpenter.)

ECON. 108 s. *Business Law* (3)—Three lectures (continuation of Econ. 107 f.). Prerequisite, Econ. 107 f. (Carpenter.)

ECON. 109 y. *General Accountancy* (6)—Three lectures.

The fundamental principles of single and double entry bookkeeping; subsidiary records and controlling accounts; partnership accounts and adjustments; corporation accounts; sinking funds; voucher systems; manufacturing accounts. Preparation of balance sheet. (Stevens.)

ECON. 110 s. *Railway Transportation* (3)—Three lectures. Follows Econ. 3 E f. Prerequisite, Econ. 3 f.

Development of the railway net of the United States; railroad finance and organization; problems of railway maintenance and method of conducting transportation; theory of railway rates; personal and local discrimination; geographical location and market competition; railway agreements; regulation by State and Federal governments; recent legislation. (Daniels.)

ECON. 111 s. *Public Utilities* (2)—Two lectures. Prerequisite, Econ. 3 f.

An examination of the fundamental basis for the concept of certain forms of business as peculiarly essential to the public welfare. Problems of rates, management, and finance of corporations engaged in supplying electricity, gas, street railway, telegraph and telephone service to the public. Government regulation and supervision of rates and finance. (Daniels.)

ECON. 112 s. *Life Insurance* (2)—Two lectures. Prerequisites, Econ. 3 f (alternate years, offered in 1929-1930).

Nature and use of life insurance, classification of policies, mortality tables, calculation of premiums, reserves, and dividends, loading, fraternal, assessment, industrial, disability and group insurance. (Cadisch.)

ECON. 113 s. *Property Insurance* (2)—Two lectures. Prerequisite, Econ. 3 f (alternate years, offered in 1928-1929).

Fire, marine, automobile, and miscellaneous forms of property insurance. Rates, reserves, underwriters, agencies and brokers, reinsurance. (Cadisch.)

ECON. 114 y. *History of Economic Theory* (4)—Two lectures. Prerequisite, Econ. 3 f, Senior standing.

History of economic doctrines and theories from the eighteenth century to the modern period, with special reference to the theories of value and distribution. (Cadisch.)

ECON. 115 s. *Foreign Trade* (3)—Three lectures. Prerequisites, Econ. 1 f and Econ. 3 f.

A study of various business methods in foreign countries. Major differences between the conduct of domestic and foreign commerce. Survey of practices generally adopted in international shipping, banking, and trading. (Daniels.)

ECON. 116 f. *Marketing Organization and Administration* (3)—Three lectures. Prerequisite, Econ. 3 f.

Marketing structure and functions from an administrative point of view. Marketing problems and methods of the manufacturer, jobber, selling agent, retailer, chain store, and mail order executive. Merchandizing, stock control, salesmanship, advertising and sales management, wholesale and retail credits and collections, market analysis, and marketing polices. (Stevens.)

ECON. 117 s. *Marketing Organization and Administration* (3)—Three lectures. Prerequisite, Econ. 116 f. Continuation of Econ. 116 f. (Stevens.)

Sociology

SOC. 2 f. *Principles of Sociology* (3)—Three lectures.

The development of human nature; personality as a social product; primary groups; isolation; forms of social interaction; social forces and processes; the structure, organization, and activities of society; social control and social change.

SOC. 3 s. *Cultural Anthropology* (2)—Two lectures.

Nature and diffusion of early cultures; sentiments, moral attitudes and mental traits of primitive man; primitive social organizations and activities; contemporary primitive cultures. Museum exhibits will be correlated with class room work.

SOC. 4 f. *Rural Sociology* (2)—Two lectures.

Historical and psychological backgrounds of rural life; the significance of isolation; factors tending to diminish isolation; structure and function of

rural communities; social factors influencing the development of rural communities and institutions; co-operation and the expansion of rural life.

Soc. 5 s. *Urban Sociology* (2)—Two lectures.

The process of urbanization; its social significance; its tendency to modify human relationships and social institutions. Special problems which arise with the growth of cities.

For Advanced Undergraduates and Graduates

Soc. 101 y. *Social Problems and Institutions* (4)—Two lectures. Prerequisite, Soc. 2 f.

Individual and group mal-adjustment, causative factors, social complications; techniques in social restoration; public and private organizations administering social treatment; the development of social work. Visits to some of the major social agencies are to be correlated with the classroom work. (Bellman.)

Soc. 102 f. *Labor Problems* (2)—Two lectures.

The social function of industry; existing relations between employer, employee, and consumer; labor problems as types of social mal-adjustment; factors in causation; present and proposed approaches to industrial equilibrium. (Bellman.)

Soc. 103 s. *History of Social Theory* (3)—Three lectures. Prerequisite, Soc. 2 f.

A survey of man's attempt to understand, explain, and control social organization. The origin of Sociology and its present progress toward becoming the science of human relationships. (Bellman.)

(See Education, Agricultural Education and Rural Life.)

EDUCATION

PROFESSORS SMALL, COTTERMAN; ASSISTANT PROFESSORS LONG, SPROWLS; MISS SMITH, MISS ROSASCO, MR. BRECHBILL.

A. History and Principles

Ed. 1 y. *Educational Guidance* (2)—One lecture. Required of students registered in the College of Education; elective for others.

This course is designed to assist students in adjusting themselves to the demands and problems of college and professional life and to guide them in the selection of college work during subsequent years. Among the topics discussed are the following: student finances; student welfare; intellectual ideals; recreation and athletics; general reading; student organization; student government; the curriculum; election of courses; the selection of extra-curricular activities.

Ed. 2 f. *Public Education in the United States* (2)—Required of all sophomores in Education.

A study of the theory and practice of public education in the United States as it has been developed and is now organized. The emphasis will be on elementary education and secondary education, with proportionate

treatment of vocational education and relations of elementary and secondary education to higher education.

Ed. 3 s. *Educational Hygiene* (2)—Open to Sophomores and Juniors. Required of Sophomores in Education.

Elements of general, individual, and group hygiene; causes of health and disease; habits; knowledge and ideals of health; health as an objective of education.

For Advanced Undergraduates and Graduates

Ed. 101 f. *Educational Psychology* (3)—Open to Juniors and Seniors. Required of all Juniors in Education.

General characteristics and use of original tendencies; principles of mental development; the laws and methods of learning; experiments in rate of improvement; permanence and efficiency; causes and nature of individual differences; principles underlying mental tests; principles which should govern school practices. (Sprowls.)

Ed. 102 s. *Technic of Teaching* (3)—Three lectures; one laboratory. Required of Juniors in Education. Prerequisite, Ed. 101.

The nature of educational objectives; steps of the lesson plan; observation and critiques; survey of teaching methods; type lessons; lesson planning; class management. (Long.)

Ed. 103 s. *Principles of Secondary Education* (3)—Required of all Seniors in Education. Prerequisites, Ed. 101, Ed. 102, and full Senior standing.

Evolution of secondary education; articulation of the secondary school with the elementary school, college and technical school, and with the community and the home; the junior high school; programs of study and the reconstruction of curricula; teaching staff; student activities. (Small.)

Ed. 104 f. *History of Education* (3)—Senior Elective.

History of the evolution of educational theory, institutions, and practices. Emphasis is upon the modern period. (Small.) Not given in 1928-1929.

Ed. 105 f. *Educational Sociology* (3)—Three lectures.

The sociological foundations of education; the major educational objectives; the function of educational institutions; the program of studies; objectives of the school subjects; group needs and demands; methods of determining educational objectives. (Cotterman.)

Ed. 106 s. *Advanced Educational Psychology* (3)—Prerequisites, Ed. 101 and Ed. 102. The latter may be taken concurrently with Ed. 106.

Principles of genetic psychology; nature and development of the human organism; development and control of instincts. Methods of testing intelligence; group and individual differences and their relations to educational practice. Methods of measuring rate of learning; study of typical learning experiments. (Sprowls.)

Ed. 107 f. *Educational Measurements* (3)—Prerequisites, Ed. 101 and Ed. 102.

A study of typical educational problems involving educational scales and standard tests. Nature of tests, methods of use, analysis of results and

practical applications in educational procedure. Emphasis will be upon tests for high school subjects. (Sprowls.)

ED. 108 s. *Mental Hygiene* (3)—Prerequisite, Ed. 101 or Psychol. 1 or equivalent.

Normal tendencies in the development of character and personality. Overcoming problems of adjustment to school and society; obsessions, fears, compulsions, conflicts, inhibitions, and compensations. Methods of personality analysis. (Sprowls.)

AG. ED. 102 s. *Rural Life and Education.*

AG. ED. 105 f. *School and Rural Community Surveys.*

(See Agricultural Education.)

For Graduates

ED. 201 y. *Seminar in Education* (6)—(The course is organized in semester units.)

Problems in educational organization and administration. Study of current literature; individual problems. (Small.)

ED. 202 f. *College Teaching* (3)—Three lectures.

Analysis of the work of the college teacher; objectives; nature of subject matter; nature of learning; characteristics of college students; methods of college teachers; measuring results; extra-course duties; problems; investigations; reports. (Cotterman.)

ED. 203 s. *Problems in Higher Education* (3)—One double period a week. Lectures, surveys, and individual reports. Prerequisite, Ed. 202 f.

American collegiate education; status of the college teacher; collegiate education in foreign countries; demands upon institutions of higher learning; tendencies in the reorganization of collegiate education; curriculum problems; equipment for teaching. (Cotterman.) Not given 1928-1929.

ED. 204 s. *Chemical Education* (2)—Two lectures. Open to graduate students majoring in chemistry. Prerequisites, Ed. 101 and Ed. 202.

Recent developments in the field of chemical education methods, laboratory design, equipment, etc. Required of all students qualifying for college chemistry teaching. (Gordon.)

B. Methods in Arts and Science Subjects (High School)

ED. 110 y. *English in Secondary Schools* (6)—Special methods and supervised teaching. Required of seniors preparing to teach English. Prerequisites, Ed. 101 and 102.

Objectives in English in the different types of secondary schools; selection of subject matter; State requirements; interpretation of the State Course of Study in terms of modern practice and group needs; organization of materials; lesson plans; measuring results; observations; class teaching; critiques. (Smith.)

ED. 111 y. *History and Civics in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach history. Prerequisites, Ed. 101 and 102; H. 1-2 y, and H. 3-4 y.

Objectives of history and civics in secondary schools; selection of subject matter; parallel reading; State requirements and State courses of study; the development of civics from the community point of view; reference books, maps, charts, and other auxiliary materials; the organization of materials; lesson plans; measuring results; observations; class teaching; critiques. (Long.)

ED. 112 y. *Foreign Language in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach foreign language. Prerequisites, Ed. 101 and 102.

Objectives of foreign language in secondary schools; selection of subject matter; State requirements and State courses of study; the organization of material for teaching; lesson plans; special devices and auxiliary materials; observation; class teaching; critiques. (Rosasco.)

ED. 113 y. *Mathematics in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach mathematics. Prequisites, Ed. 101 and 102.

Objectives of mathematics in secondary schools; historic retrospect; selection of subject matter; State requirements and State courses of study; proposed reorganizations; lesson plans; textbooks and supplementary materials; measuring results; standard tests; observations; class teaching; critiques. (Brechbill.)

ED. 114 y. *Science in Secondary Schools* (6)—Special methods and supervised teaching. Required of Seniors preparing to teach science. Prerequisites, Ed. 101 and 102.

Objectives of science in secondary schools; historic retrospect; selection of subject matter; State requirements and State courses of study; textbooks, reference works, and other sources of materials; the organization of materials for instruction; methods of the class period; lesson plans; the preparation and organization of laboratory instruction; notebooks; measuring results; standard tests; observation; class teaching; critiques. (Brechbill.)

ENGINEERING

PROFESSORS JOHNSON, GWINNER, CREESE, STEINBERG, NESBIT; ASSISTANT PROFESSORS HODGINS, HOSHALL, SKELTON; MR. PYLE, MR. HENNICK.

Civil Engineering

C. E. 101 f. *Elements of Railroads* (3)—Two lectures; one laboratory. Prerequisite, Surv. 2. Required of Juniors in Civil Engineering.

The theory and practice of railroad surveys, alignment and earthwork. Preliminary steps toward complete plans for a short railroad. (Skelton.)

C. E. 102 s. *Elements of Design of Structures* (5)—Four lectures; one laboratory. Prerequisite, Mech. 2. Required of Juniors in Civil Engineering.

The theory and elementary design of structures of masonry and of steel. Analysis of stresses in roof trusses, plate girders, bridges, trusses, retaining walls, and dams. (Steinberg and Skelton.)

C. E. 103 s. *Elements of Steel Design* (2)—One lecture; one laboratory. Required of Juniors in Mechanical Engineering.

Design of steel beams and columns. Analysis of roof trusses, plate girders, and traveling cranes. Particular application to industrial buildings. (Skelton.)

C. E. 104 y. *Buildings, Masonry and Steel* (4)—Three lectures; one laboratory. Prerequisite, C. E. 102. Required of Seniors in Civil Engineering.

A continuation of C. E. 102 with particular application to the design of buildings both of masonry and of steel. (Skelton).

C. E. 105 y. *Bridges, Masonry and Steel* (4)—Three lectures; one laboratory. Prerequisite, C. E. 102. Required of Seniors in Civil Engineering.

A continuation of C. E. 102 with particular application to the design of bridges both of masonry and of steel. (Steinberg.)

C. E. 106 f. *Highways* (4)—Three lectures; one laboratory. Prerequisites, Surv. 3, Mech. 2. Required of Seniors in Civil Engineering.

Location, construction, and maintenance of roads and pavements. Highway contracts and specifications, estimates and costs, highway work, highway legislation, highway economics, and highway transportation. The course will include,in addition to lecture and classroom work, field inspection trips. (Johnson.)

C. E. 107 y. *Sanitation* (6)—Three lectures. Prerequisite Mech. 2. Required of Seniors in Civil Engineering.

Methods of estimating consumption and designing water supply and sewerage systems. (Pyle).

C. E. 108 s. *Thesis* (4)—Required of Seniors in Civil Engineering.

In this course the student selects, with faculty approval, a subject in Civil Engineering design or research. He makes such field or laboratory studies as may be needed. Weekly reports of progress are required, and frequent conferences are held with the faculty members to whom the student is assigned for advice. A written report is required to complete the work. (Johnson.)

Drafting

Dr. 1 y. *Engineering Drafting* (2)—One laboratory. Required of all Freshmen in Engineering.

Freehand Drawing—Lettering, exercises in sketching of technical illustrations and objects, proportion and comparative measurements.

Mechanical Drawing—Use of instruments, projections and working drawings, drawing to scale in pencil and in ink, topographic drawing, tracing and blue printing.

Dr. 2 y. *Descriptive Geometry* (4)—Two laboratory periods. Prerequisite, Dr. 1. Required of all Sophomores in Engineering.

Orthographic projection as applied to the solution of problems relating to the point, line, and plane, intersection of planes with solids, and development. Generation of surfaces; planes, tangent and normal to surfaces; intersection and development of curved surfaces. Shades and shadows, perspective, map projection.

Electrical Engineering

E. E. 101 f. *Industrial Application of Electricity* (3)—Three lectures. Prerequisites, Phys. 2, Math. 7.

The principles and practice of the application of direct and alternating current generators and motors to specific industrial processes. (Cresse.)

E. E. 102 y. *Direct Currents* (10)—Three lectures; two laboratories. Prerequisites, Phys. 2 and Math. 7.

Principles of design, construction, and operation of direct current generators and motors and direct current control apparatus. The construction, characteristics, and operation of primary and secondary batteries and the auxiliary control equipment. Study of elementary alternating current circuits.

Experiments on the calibration of laboratory instruments, the manipulation of precision instruments, battery characteristics, and the operation and characteristics of direct current generators and motors. (Hodgins.)

E. E. 103 y. *Electrical Machine Design* (2)—One laboratory. Prerequisites, Phys. 2, Math. 7, and to take concurrently with E. E. 102.

Materials of construction and design of the electric and magnetic circuits of direct current generators and motors. (Hodgins)

E. E. 104 y. *Alternating Currents* (10)—Three lectures; two laboratories. Prerequisite, E. E. 102.

Analytical and graphic solution of problems on single phase and polyphase circuits; construction, characteristics, and operation of all types of alternating current generators and motors; switchboard appliances, the use of the oscillograph; alternating current power measurements. (Creese.)

E. E. 105 y. *Electrical Machine Design* (3)—One laboratory first semester; two laboratories second semester. Prerequisites, E. E. 103, M. E. 101, and to take concurrently E. E. 104.

Materials of construction and design of the electric and magnetic circuits of alternating current generators,motors, and transformers. (Hodgins.)

E. E. 106 y. *Electric Railways and Power Transmission* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102, and to take concurrently E. E. 104.

Traffic studies, train schedules, motor characteristics, and the development of speed-distance and power-time curves, systems of control, motors and other railway equipment, electrification system for electric railways, including generating apparatus, transmission lines, substations and distribution of electrical energy for car operation; electrification of steam roads and application of signal systems, problems in operation from the selection of proper car equipment to the substation apparatus.

Survey of the electrical equipment required in central stations and substations, transmission of electric power, practical problems illustrating the principles of installation and operation of power machinery. (Hodgins.)

E. E. 107 y. *Telephones and Telegraphs* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 and to take concurrently E. E. 104.

History and principles of magneto telephone and variable resistance transmitter, carbon transmitter, telephone receiver, induction coils, and calling equipment. These components of the telephone then are studied as a complete unit in the local battery and common battery telephones. Magneto and common battery switchboards used in telephone exchanges, automatic telephones, and the operation of simple, duplex, and quadruplex telegraphy. Solution of analytical problems on telephone transmission.

In the laboratory the units are assembled and operated. (Hodgins.)

E. E. 108 y. *Radio Telegraphy and Telephony* (7)—Two lectures and one laboratory first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102, and to take concurrently E. E. 104.

Principles of radio telegraphy and telephony, design, construction, and operation of transmitting and receiving apparatus, and special study of the use of the vacuum tube for short wave transmitting and receiving. Experiments include radio frequency measurements and the testing of various types of receiving circuits. (Creese.)

E. E. 109 y. *Illumination* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102, and to take concurrently E. E. 104.

Series systems of distribution, methods of street lighting, calculation of voltage drop, regulation, weights of wire and methods of feeding parallel systems, principles and units used in illumination problems, lamps and reflectors, candle-power measurements of lamps, measurement of illumination intensities and calculations for illumination of laboratories and classrooms. (Creese.)

General Engineering Subjects

ENGR. 1 y. *Prime Movers* (4)—Two lectures. Prerequisites, Math. 7, and Phys 2. Required of all Juniors in Engineering.

Salient features of the operation of steam, gas, hydraulic and electric prime movers and pumps. Comparison of types of each, methods of assembling or setting up in place for operation. Service tests. (Nesbit.)

ENGR. 2 y. *Engineering Geology* (2)—One laboratory. Lectures and field trips. Required of all Juniors in Engineering.

Study of common rocks and minerals, geologic processes and conditions affecting problems of water supply, bridge, railroad, and highway construction, dams and reservoirs, tunnels, canals, river and harbor improvements, irrigation works, and rock excavation. (Ladd.)

ENGR. 3 f. *Public Utilities* (1)—One lecture. Prerequisite, Econ. 5 E. Required of all Seniors in Engineering.

The development of public utilities, franchises, functions, methods of financing and control of public utilities. Service standards and their attainment in electric, gas, water, railway, and other utilities. The principles

that have been adopted by the courts and public service commissions for the evaluation of public utilities for ratemaking and other purposes. (Daniels.)

ENGR. 101 f. *Engineering Jurisprudence* (1)—One lecture. Required of all Seniors in Engineering.

A study of the fundamental principles of law relating to business and to engineering; including contracts, agency, sales, negotiable instruments, corporations, and common carriers. These principles are then applied to the analysis of general and technical clauses in engineering contracts and specifications. (Steinberg.)

Mechanics

MECH. 1 y. *Engineering Mechanics* (7)—Three lectures and one laboratory first semester. Two lectures and one laboratory second semester. Prerequisites, Math. 7 and Phys. 2. Required of Juniors in Electrical and Mechanical Engineering.

Applied Mechanics—The analytical study of statics dealing with the composition and resolution of forces, moments and couples, machines and the laws of friction, dynamics, work, energy, and the strength of materials.

Graphic Statics—The graphic solution of problems in mechanics, center of gravity, moments of inertia and determination of stresses in frame structures.

Elements of Hydraulics—Flow of water in pipes, through orfices and in open channels. Determination of the co-efficient of discharge, velocity, and contraction in pipes and orfices. (Steinberg, Skelton.)

MECH. 2 y. *Engineering Mechanics* (9)—Four lectures and one laboratory first semester. Three lectures and one laboratory second semester. Prerequisites, Math. 7, and Phys. 2. Required of Juniors in Civil Engineering.

This course is similar in content to Mech. 1 y, but with greater emphasis placed on strength of material and hydraulics. (Steinberg, Skelton.)

MECH. 3 s. *Materials of Engineering* (2)—One lecture; one laboratory. To take concurrently with Engineering Mechanics. Required of all Juniors in Engineering.

The composition, manufacture, and properties of the principal materials used in engineering and of the conditions that influence their physical characteristics. The interpretation of specifications and of standard tests. Laboratory work in the testing of steel, wrought iron, timber, brick, cement, and concrete. (Johnson, Pyle, and Hoshall.)

MECH. 101 f. *Thermodynamics* (3) — Three lectures. Prerequisites, Phys. 2, Engr. 1. Required of Seniors in Electrical Engineering (Nesbit.)

MECH. 102 y. *Thermodynamics* (6) — Three lectures. Prerequisites, Physics 2, Engr. 1. Required of Seniors in Mechanical Engineering.

Thermodynamics as applied to properties of gases, cycles of heat, engines using gases. Properties of vapors. Entropy. The internal combustion engine. The steam turbine. Flow of fluids, and the application of thermodynamics to compressed air and refrigerating machinery. (Nesbit.)

Mechanical Engineering

M. E. 101 f. *Elements of Machine Design* (1)—One laboratory. Prerequisites, Math. 7 and Phys. 2. Required of Juniors in Electrical Engineering.

Empirical design of machine parts. (Hoshall.)

M. E. 102 y. *Kinematics and Machine Design* (8)—Four lectures and two laboratories first semester. One lecture and one laboratory second semester. Prerequisites, Math. 7 and Phys. 2. Required of Juniors in Mechanical Engineering.

The application of the principles involved in determining the properties and forms of machine parts. The design of bolts, screws, shafting, and gears. The theory and practice of the kinematics of machinery, as applied to ropes, belts, chains, gears and gear teeth, wheels in trains, epicyclic trains, cams, linkwood, parallel motions. Miscellaneous mechanisms and aggregate combinations. (Hoshall.)

M. E. 103 y. *Design of Prime Movers* (6)—Two lectures; one laboratory. Prerequisites, M. E. 102 and Engr. 1. Required of Seniors in Mechanical Engineering.

Analysis of the stresses in gas and steam engines. Proportioning the essential parts and estimating the cost of each. The steam boiler; its design and cost. (Nesbit.)

M. E. 104 s. *Design of Power Plants* (3)—Two lectures; one laboratory. Prerequisites, Engr. 1, Mech. 101, M. E. 102. Required of Seniors in Mechanical Engineering.

The design of a complete power plant, including the layout of building and installation of equipment. The selection of types and capacities of the various units required. (Nesbit.)

M. E. 105 f. *Design of Pumping Machinery* (2)—One lecture; one laboratory. Prerequisites, M. E. 102 and Mech. 1, 3. Required of Seniors in Mechanical Engineering. (Nesbit.)

Design of double-acting steam pumps and centrifugal pumps. Vacuum, condenser, and water works pumps.

M. E. 106 s. *Engineering Finance* (2)—Two lectures. Required of Seniors in Mechanical Engineering.

Financial problems of the engineer. Cost segregation and cost analysis. Basis of price and rates. Fixed charges and operating costs. Replacement cost. Depreciation. Maintenance. Taxes and insurance. Unit cost determination. Determination of size of system for best financial efficiency. (Nesbit.)

M. E. 107 y. *Mechanical Laboratory* (2)—One laboratory. Prerequisites, Engr. 1; Mech. 1, 3. Required of Seniors in Mechanical Engineering.

Calibration of instruments, gauges, indicator springs, planimeters, steam, gas, and water meters.

Indicated and brake horsepower of steam and internal combustion engines, setting of plain valves, Corliss valves. Tests for economy and capacity of boilers, engines, turbines. Pumps and other prime movers. Feed water

heaters, condensers; B. T. U. analysis of solid, gaseous, and liquid fuels and other complete power plant tests.

M. E. 108 s. *Heating and Ventilation* (2)—Two lectures. Prerequisites, Engr. 1, and Mech. 1, 3. Required of Juniors in Mechanical Engineering. (Nesbit.)

The principles and methods of construction in use in various systems of heating and ventilating; the design, erection, and operation or heating plants.

Shop

SHOP 1 y. *Shop and Forge Practice* (2)—One laboratory. Required of all Freshmen in Engineering.

The use and care of wood-working tools, exercises in sawing, planing, turning, and laying out work from blueprints. Patternmaking with moulding and casting demonstrations to give understanding of general principles. Forging of iron and steel, welding and making of carbon steel tools. Demonstrations in oxy-acetylene welding of steel, cast iron, brass, and aluminum, also brazing of malleable iron and steel.

SHOP 2 f. *Machine Shop Practice* (1)—One laboratory period. Prerequisite, Shop 1. Required of all Sophomores in Engineering.

Exercises in bench work, turning, planing, drilling, and pipe threading.

SHOP 3 s. *Machine Shop Practice* (2)—One lecture; one laboratory. Prerequisite, Shop 2. Required of all Sophomores in Mechanical and Electrical Engineering.

Advanced practice with standard machine shop machines. Exercises in thread cutting, surface grinding, fluting, and cutting of spur and twisted gears.

Calculations of machine shop problems involving lathe and milling machines. Problems relating to methods of manufacture of machine parts by use of jigs and time-saving fixtures.

SHOP 4 f. *Foundry Practice* (1)—One laboratory. Prerequisite, Shop 1. Required of Juniors in Mechanical Engineering.

Casting in brass, aluminum, and cast iron. Core making. The operation of furnace and cupola. Lectures on metals, fuels, and a foundry equipment.

Surveying

SURV. 1 f. *Surveying* (1)—Lecture and laboratory work. Prerequisite, Math. 7. Required of all Sophomores in Engineering.

Theory of and practice in the use of the Tape, Compass, Transit, and Level. General surveying methods, map reading, traversing, theory of stadia.

SURV. 2 s. *Plane Surveying* (2)—Lecture and Laboratory work. Prerequisite, Surv. 1. Required of Sophomores in Civil Engineering.

Land surveying and map making for topography and planning. Practice in stadia. Computations of coordinates. Plotting of control and detail.

Establishing of line and grade for construction purposes. Laying out simple curves. Estimation of earthwork.

SURV. 101 f. *Advanced Surveying* (3)—One lecture; two laboratories. Prerequisite, Surv. 1 and 2. Required of Juniors in Civil Engineering.

Adjustment of Instruments. Determination of Azimuth by Stellar and Solar observations. Triangulation, Precise leveling, Trigonometric Leveling and Geodetic Surveying, together with the computations and adjustments necessary. (Pyle.)

ENGLISH LANGUAGE AND LITERATURE

PROFESSOR HOUSE; ASSOCIATE PROFESSORS HARMAN, HALE; ASSISTANT PROFESSOR LEMON; MR. PYLES, MISS YOUNG.

ENG. 1 y. *Composition and Rhetoric* (6)—Freshman year. Prerequisite, three units of high school English. Required of all four-year students.

Parts, principles, and conventions of effective thought communication. Reading, study, and analysis of standard contemporary prose specimens. Original exercises and themes.

ENG. 2 y. *Elements of Literature* (6)—Three lectures. Prerequisite, three units of high school English.

Examination of the principles of literary form. Study and interpretation of selected classics.

ENG. 3 f. *Advanced Composition and Rhetoric* (2)—Prerequisite, Eng. 1. Eng. 3-4 optional with Eng. 5-6 as a requirement for all students whose major is English.

Study and analysis of the best modern essays as a basis of class papers. Also original themes on assigned topics.

ENG. 4 s. *Advanced Composition and Rhetoric* (2)—Continuation of Eng. 3 f. Prerequisite, Eng. 3 f.

ENG. 5 f. *Expository Writing* (2)—Prerequisite, Eng. 1. Eng. 5-6 optional with Eng. 3-4 as a requirement for all students whose major is English.

Study of the principles of exposition. Analysis and interpretation of material bearing upon scientific matter. Themes, papers, and reports.

ENG. 6 s. *Expository Writing* (2).

Continuation of Eng. 5 f. Prerequisite, Eng. 5 f.

ENG. 7 f. *History of English Literature* (3)—Three lectures. Prerequisite, Eng. 1. Required of all students whose major is English.

A general survey, with extensive reading and class papers.

ENG. 8 s. *History of English Literature* (3).

Continuation of Eng. 7 f. Prerequisite, Eng. 7 f.

ENG. 9 f. *American Literature* (3)—Three lectures. Prerequisite, Eng. 1.

Lectures on the development of American literary types. Class papers.

ENG. 10 s. *American Literature* (3).

Continuation of Eng. 9 f. Prerequisite, Eng. 9 f.

Eng. 11 f. *Modern Poets* (3)—Three lectures. Prerequisite, Eng. 1.

English and American poets of the latter part of the Nineteenth and of the Twentieth Century.

ENG. 12 s. *Modern Poets* (3).

Continuation of Eng. 11 f. Prerequisite, Eng. 1 y.

ENG. 13 f. *The Drama* (3)—Prerequisite, Eng. 1.

A study of representative plays in the development of European and American drama. Reports and term themes.

ENG. 14 s. *The Drama* (3)—Continuation of Eng. 13 f. Prerequisite, Eng. 13 f.

ENG. 15 f. *Shakespeare* (3)—Three lectures. Prerequisite, Eng. 1.

An intensive study of selected plays.

ENG. 16 s. *Shakespeare* (3).

Continuation of Eng. 15 f. Prerequisite, Eng. 1 y.

ENG. 17 f. *Business English* (2)—Two lectures. Prerequisite, Eng. 1.

This course develops the best methods of effective expression, both oral and written, used in business relations.

ENG. 18 s. *Business English* (2).

Continuation of Eng. 17 f. Prerequisite, Eng. 17 f.

For Advanced Undergraduates and Graduates

ENG. 105 s. *Poetry of the Romantic Age* (3)—Three lectures. Prerequisite, Eng. 7-8 or Comp. Lit. 105, first semester. A study of the Romantic movement in England as illustrated in the works of Shelley, Keats, Byron, Wordsworth, Coleridge. (Hale.)

(This course is identical with the second semester of Comp. Lit. 105.)

ENG. 118 y. *Literature of the Fourteenth Century* (4)—Prerequisite, Eng. 7 f.

Lectures and assigned readings in English literature at the close of the Middle Ages and the beginning of the Renaissance in England, including the metrical romances, ballads, and selections from Langland, Gower, and Chaucer. (Hale.)

ENG. 119 y. *Anglo-Saxon* (6)—Required of all students whose major is English.

A study of Anglo-Saxon (Old English) grammar and literature. Lectures on the principles of comparative philology and phonetics. (House.)

ENG. 122 f. *The Novel* (2)—Two lectures.

Lectures on the principles of narrative structure and style. Class reviews of selected novels, chiefly from English and American sources. (House.)

ENG. 123 s. *The Novel* (2).

Continuation of Eng. 122 f. (House.)

ENG. 124 f. *English and American Essays* (2)—Two lectures.

A study of the philosophical and critical essays of England and America: Bacon, Lamb, Macaulay, Carlyle, Ruskin, Emerson, Chesterton. (House.)

ENG. 125 s. *Authorship* (2)—Two lectures. Admission to class on recommendation of instructor.

Practice in the making of literature of various types: verse, essay, fiction, drama. (House.)

ENG. 126 f. *Victorian Poets* (2)—Two lectures.

Studies in the poetry of Tennyson, Browning, Arnold, Swinburn, and others.

ENG. 127 s. *Victorian Poets* (2).

Continuation of Eng. 126 f. (House.)

ENG. 129 f or s. *College Grammar* (3)—Three lectures. Required of all students whose major is English. The course is completed each semester.

Studies in the descriptive grammar of modern English, with some account of the history of forms. (Harman.)

ENG. 130 f. *The Old Testament as Literature*—Two lectures.

A study of the sources, development, and literary types. (Hale.)

For Graduates

ENG. 201. *Seminar*—Credit proportioned to the amount of work and ends accomplished. (Staff.)

Original research and the preparation of dissertations looking toward advanced degrees.

ENG. 202 y. *Beowulf* (4)—Prerequisite, Eng. 119.

Critical study of grammar and versification, with some account of the legendary lore. (Harman.) Alternate with Eng. 203-204.

ENG. 203 f. *Middle English* (2)—Prerequisite, Eng. 119.

A study of excerpts of the Middle English period, with reference to etymology and syntax. (Harman.)

ENG. 204 s. *Gothic* (2)—Prerequisite, Eng. 119.

A study of the forms and syntax, with readings from the Ulfilas Bible. Correlation of Gothic speech sounds with those of Old English. (House.) Eng. 203-204 alternate with Eng. 202.

ENTOMOLOGY

PROFESSOR CORY; MR. KNIGHT.

ENT. 1 f or s. *Introductory Entomology* (3)—Two lectures; one laboratory.

The relations of insects to the daily life and activities of the student. General principles of structural and systematic entomology. Field work and the preparation of a collection of insects. (Open to Sophomores, and to Freshmen majoring in Entomology.)

ENT. 2 y. *Intermediate Entomology* (3)—A full year course. One lecture; two laboratories.

A thorough study of the anatomy, physiology, taxonomy, biology, behavior, and distribution of insects. A fundamental course given in preparation for most of the advanced courses. Prerequisite, Ent. 1.

ENT. 4 y. *Special Problems*—Prerequisite—consult department.

The intensive investigation of some entomological subject. A report of the results is submitted as part of the requirement for graduation.

ENT. 5 s. *Insecticides and Their Application* (2)—One lecture; one laboratory.

The principles of insecticides, their chemistry, preparation, and application; construction, care, and use of spray and dusting machinery; fumigation; methods and apparatus in mechanical control. Prerequisite, Ent. 1.

ENT. 6 f. *Medical Entomology* (3)—Three lectures.

The relation of insects to diseases of man, directly and as vectors of pathogenic organisms. Control of pests of man. The fundamentals of human parasitology.

Prerequisite, Ent. 1 or consult instructor.

ENT. 7 y. *Entomological Technique and Scientific Delineation* (2).

Collecting, rearing, preserving, and mounting of insects. The preparation of exhibits, materials for instruction, entomological records. Methods of illustrating, including drawing, photography, lantern slide making, and projection. Useful for prospective teachers of biology as well as for the entomological student. Prerequisite, Ent. 1.

Courses for Advanced Undergraduates and Graduates

ENT. 101 y. *Economic Entomology* (3)—Three lectures.

An intensive study of the problems of applied entomology, including life history, ecology, behavior, distribution, parasitism, and control. (Cory.)

ENT. 102 y. *Economic Entomology* (2)—Two laboratories.

Expansion of Ent. 101 y to include laboratory and field work in economic entomology. (Cory.) Not offered in 1928-1929.

ENT. 103 y. *Seminar* (1)—Time to be arranged.

Presentation of original work, book reviews and abstracts of the more important literature. (Cory, Knight.)

ENT. 104 y. *Insect Pests of Special Groups* (4).

A study of the principal insects of one or more of the following groups, founded upon food preferences and habitat. The course is intended to give the general student a comprehensive view of the insects that are of importance in his major field of interest and detailed information to the student specializing in entomology. Prerequisite, Ent. 1.

Insect Pests of 1. Fruit. 2. Vegetables. 3. Flowers, both in the open and under glass. 4. Ornamentals and Shade Trees. 5. Forests. 6. Field Crops. 7. Stored Products. 8. Live Stock. 9. The Household. Nos. 1 and 2 offered in 1928-1929 and such others as requests may indicate to be in demand. (Cory-Knight.)

Graduate Students

ENT. 201. *Advanced Entomology* (2).

Studies of minor problems in morphology, taxonomy, and applied entomology, with particular reference to preparation for individual research. (Cory.)

ENT. 202 y. *Research in Entomology* (6-10).

Advanced students having sufficient preparation, with the approval of the head of the department, may undertake supervised research in morphology, taxonomy, or biology and control of insects. Frequently the student may be allowed to work on Station or State Horticultural Department projects. The student's work may form a part of the final report on the project and be published in bulletin form. A dissertation, suitable for publication, must be submitted at the close of the studies as a part of the requirements for an advanced degree. (Cory.)

FARM FORESTRY

PROFESSOR BESLEY.

FOR. 1 s. *Farm Forestry* (3)—Two lectures; one laboratory. Alternate year course offered in 1928-29. Junior and senior years. Prerequisite, Bot. 101.

A study of the principles and practices involved in managing woodlands on the farm. The course covers briefly the identification of trees, forest protection, management, measurement, and utilization of forest crops, nursery practice, and tree planting. The work is conducted by means of lectures and practice in the woods.

FARM MANAGEMENT

PROFESSOR W. T. L. TALIAFERRO.

F. M. 1 s. *Farm Accounting* (3)—Two lectures; one laboratory. Open to juniors and seniors.

A concise practical course in the keeping of farm accounts and in determining the cost of farm production.

F. M. 2 f. *Farm Management* (4)—Four lectures.

The business of farming from the standpoint of the individual farmer. This course aims to connect the principles and practice which the student has acquired in the several technical courses and to apply them to the development of a successful farm business. Prerequisite, F. M. 1 s.

See also Agricultural Economics, Page 153.

FARM MECHANICS

PROFESSOR CARPENTER.

F. MECH. 101 f. *Farm Machinery* (3)—Two lectures; one laboratory.

A study of the design and adjustments of modern horse and tractor-drawn machinery. Laboratory work consists of detailed study of actual machines, their calibration, adjustment, and repair.

F. MECH. 102 s. *Gas Engines, Tractors, and Automobiles* (4)—Three lectures; one laboratory.

A study of the design and operation of the various types of internal combustion engines used in farm practice.

F. MECH. 103 f. *Advanced Gas Engines* (2)—One lecture; one laboratory;. Prerequisite, F. Mech. 102.

An advanced study of the four-cylinder gasoline engine.

F. MECH. 104 f. *Farm Shop Work* (1)—One laboratory.

A study of practical farm shop exercises offered primarily for prospective teachers of vocational agriculture.

F. MECH. 105 f. *Farm Buildings* (2)—Two lectures.

A study of all types of farm structures, also of farm heating, lighting, water supply, and sanitation systems.

F. MECH. 107 s. *Farm Drainage* (2)—One lecture; one laboratory.

A study of farm drainage systems, including theory of tile under-drainage, the depth and spacing of laterals, calculation of grades, and methods of construction. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

GENETICS AND STATISTICS

ASSOCIATE PROFESSOR KEMP.

GEN. 101 f. *Genetics* (3)—Two lectures; one laboratory.

A general course designed to give an insight into the principles of genetics or of heredity, and also to prepare students for later courses in the breeding of animals or of crops.

GEN. 102 s. *Advanced Genetics* (3)—Two lectures; one laboratory. Prerequisite, Gen. 101 f. Alternate year course. Not offered in 1928-1929.

A consideration of chromosome irregularities and other mutations, interspecies crosses, genetic equilibrium, and the results of artificial attempts to modify germplasm.

GEN. 111 f. *Statistics* (2)—Two lectures.

A study of the collection, analysis, interpretation, and presentation of statistics. The course includes a study of expressions of type, variability, and correlation, together with the making of diagrams, graphs, charts, and maps.

GEN. 112 s. *Advanced Statistics* (2)—Two lectures. Prerequisite, Gen. 111 f. or its equivalent.

A study of the theory of error, measures of relationship, multiple and partial correlation, predictive formulas, curve fitting.

GEN. 201 y. *Research*—Credit according to work done.

GEOLOGY

PROFESSOR BRUCE.

GEOL. 1 f. *Geology* (3)—Two lectures; one laboratory.

A textbook, lecture, and laboratory course, dealing with the principles of geology and their application to agriculture. While this course is designed primarily for agricultural students in preparation for technical courses, it may also be taken as part of a liberal education.

GREEK

PROFESSOR SPENCE.

GREEK 1 y. *Elementary Greek* (8)—Four lectures.

Drill and practice in the fundamentals of Greek grammar and the acquisition of a vocabulary, with translation of simple prose.

GREEK 2 y. *Greek Grammar, Composition and Translation of Selected Prose Work* (8)—Four lectures. Prerequisite, Gk. 1 y or two entrance units in Greek.

HISTORY AND POLITICAL SCIENCE

PROFESSORS CROTHERS, SPENCE; ASSOCIATE PROFESSOR SCHULZ; DR. JAEGER.

A. History

H. 1 y. *Modern European History* (6)—Three lectures and assignments.

The object of the course is to acquaint students with the chief events in European History during the modern period. The lectures are so arranged as to present a comparative and contrastive view of the most important events during the period covered. (Jaeger.)

H. 2 y. *American History* (6)—Three lectures and assignments. Open to sophomores.

An introductory course in American History from the discovery of the New World to the present time. (Crothers.)

H. 3 y. *History of England and Greater Britain* (6)—Three lectures and assignments. Open to freshmen.

A survey course of English History. (Jaeger.)

For Advanced Undergraduates and Graduates

H. 101 f. *American Colonial History* (3)—Three lectures and assignments. Prerequisite, H 2 y.

A study of the political, economic, and social development of the American people from the discovery of America through the formation of the Constitution. (Crothers.)

H. 102 s. *Recent American History* (3)—Three lectures. Prerequisite, H. 2 y.

The history of national development from the close of the reconstruction period to the present time. (Crothers.)

H. 103 y. *World History since 1914* (6)—Three lectures.

A study of the principal nations of the world since the outbreak of the World War. (Alternates with H. 104 y. Not given in 1928-1929.) (Jaeger.)

H. 104 y. *Diplomatic History of Europe in the Nineteenth and Twentieth Centuries* (6)—Three lectures.

A study of the European nations, stressing their political problems and their political activities. (Alternates with H. 103 y.) (Jaeger.)

H. 105 s. *History of Maryland* (2)—Two lectures.

A study of the Colony of Maryland and its development into statehood. (May not be given 1928-1929.) (Spence.)

H. 106 f. *Ancient Civilization* (3)—Three lectures. Required of students taking a major or minor in Classical Languages.

Treatment of ancient times, including Geography, Mythology, and Philosophy. (Spence.)

H. 107 y. *American Diplomacy* (4)—Two lectures.

A study of American foreign policy. (Alternates with H. 108 y.) (Crothers.)

H. 108 y. *History of the American Frontier* (4)—Two lectures.

The development of the West. (Alternates with H. 107 y. Not given 1928-1929.) (Crothers.)

B. Political Science

SOC. SCI. 1 y. *Elements of Social Science* (6). (For description of course, see Economics and Sociology, Page 172.)

POL. SCI. 2 f. *Government of the United States* (3)—Three lectures. Open to sophomores.

A study of the Government of the United States. Evolution of the Federal Constitution; function of the Federal Government.

POL. SCI. 3 s. *Governments of Europe* (3)—Three lectures. Prerequisite, Pol. Sci. 2 f.

A rapid survey and comparative study of the political organization of the principal states of Europe. Classification of forms, separation of powers.

For Advanced Undergraduates and Graduates

POL. SCI. 101 s. *American Municipal Government* (2)—Two lectures. Prerequisite, Pol. Sci. 2 f.

A study of American City Government; organization and administration; city manager and commission plans; initiative, referendum, and recall.

POL. SCI. 102 y. *Constitutional Law and History of the United States* (4)—Two lectures and cases. Prerequisite, Pol. Sci. 2 f. Seniors and graduate students.

A study of the historical background of the Constitution and its interpretation. (Alternates with Pol. Sci. 103 y. May not be given 1928-1929.)

POL. SCI. 103 y. *International Law* (4)—Two lectures and cases. Prerequisite, Pol. Sci. 2 f. Seniors and graduate students.

A study of the sources, nature, and sanction of international law, peace, war, and neutrality. (Alternates with Pol. Sci. 102 y. May not be given 1928-1929.)

POL. SCI. 104 s. *Political Parties in the United States* (3)—Prerequisite, Pol. Sci. 2 f.

The development and growth of American political parties. Party organization and machinery. (May not be given 1928-1929.) (Schulz.)

HOME ECONOMICS

PROFESSORS MOUNT, MCFARLAND; ASSOCIATE PROFESSOR WELSH; ASSISTANT PROFESSOR MURPHY.

H. E. 1 y. *Home Economics Lectures* (1)—One lecture. General survey of the field of Home Economics.

For Advanced Undergraduates

H. E. 101 s. *Seminar* (3)—Three lectures.

Book reviews and abstracts from scientific papers and bulletins relating to Home Economics, together with criticisms and discussion of the work presented.

Textiles and Clothing

H. E. 11 s. *Elementary Textiles and Clothing* (3)—Two recitations and one laboratory.

History of textile fibers; identification of textile materials; variation of weave in regard to beauty and strength; use and value of fibers for clothing and household furnishings, clothing economics.

Review of fundamental stitches; darning and patching; practice in hand and machine sewing; use of machine attachments; study of commercial patterns. (McFarland and Assistant.)

H. E. 111 f. *Pattern Designing and Dressmaking* (4)—One lecture; three laboratories. Prerequisite, H. E. 11.

Drafting, cutting, fitting, and designing of patterns. Construction of woolen dress from pattern designed in class, construction of silk dress, made-over dress, dinner or evening gown. Clothing Economics. (McFarland.)

Foods and Nutrition

H. E. 31 y. *Elementary Foods* (6)—One recitation; two laboratories. Prerequisite, Inorganic Chemistry.

Principles and processes of Cookery. Production and composition of foods. Planning and serving of meals.

For Advanced Undergraduates

H. E. 131 f. *Nutrition* (3)—Three recitations. Prerequisite, H. E. 31 and Chemistry of Foods.

Food requirements and metabolism. Diets for the normal person. (Welsh.)

H. E. 132 s. *Nutrition* (3)—Two lectures; one laboratory. Prerequisite, H. E. 131.

Diets and metabolism of the abnormal person; invalid cookery; feeding of children. (Welsh.)

H. E. 133 f. *Preservation and Demonstration of Foods* (2)—One lecture; one laboratory. Prerequisite, H. E. 31.

Canning and preserving; practice in demonstration. (Welsh.)

H. E. 134 s. *Advanced Foods* (3)—One lecture; two laboratories. Prerequisite, H. E. 31.

Experimental work in food and cookery; fancy cookery; catering. (Welsh.)

H. E. 135 s. *Practice in Food Problems* (5)—(Welsh).

H. E. 112 s. *Advanced Clothing* (3)—One lecture; two laboratories. Prerequisite, H. E. 111.

Designing and dress construction continued. Special problems in fitting worked out. (McFarland.)

H. E. 113 f or s. *Millinery* (2)—Two laboratory periods.

Millinery stitches and simple trimming; drafting of patterns for hats; making and covering of frames; making hats in velvet, silk, straw, and transparent materials; renovation of materials. (Murphy.)

H. E. 114 s. *Practice in Textile and Clothing Problems* (5)—Prerequisite, H. E. 111.

Opportunity for commercial experience in shops, laboratories, etc. (McFarland.)

Art

H. E. 21 f. *Composition and Design* (3)—One lecture; two laboratories.

Lectures: Development and appreciation of painting to the Eighteenth Century. Space division and space relation; color schemes and exercises; original designs in which lines, values, and colors are used to produce fine harmony. (McFarland.)

H. E. 22 s. *Still Life* (1)—One laboratory. Prerequisite, H. E. 21.

Drawing objects in charcoal and color. Emphasis on form, light and dark, and shadows. Offered alternate years. (McFarland.)

H. E. 23 s. *Figure Sketching* (1)—One laboratory. Alternates with Still Life.

Figures in charcoal and pencil. Emphasis on action, form, and value relation. Prerequisite, H. E. 21. (McFarland.)

H. E. 24 s. *Costume Design* (3)—One lecture; two laboratories. Prerequisite, H. E. 21. (McFarland.)

Appropriate dress; application of color, harmony, and proportion of parts to costumes designed in ink and water color; history of costume.

For Advanced Undergraduates

H. E. 121 s. *Home Architecture and Interior Decoration* (3)—Two lectures; one laboratory. Prerequisite, H. E. 21.

Style of architecture; application of colors in Home Decorations; furnishings from a sanitary, economical, and artistic point of view. (Murphy.)

H. E. 122 s *Applied Art* (1)—One laboratory period.

Review of fancy stitches applied in embroidery, lace, and stencils, to lamp shades, table runners, etc. (Murphy.)

Home and Institutional Management

For Advanced Undergraduates

H. E. 141 s. *Home Management and Mechanics of the Household.*

The operation and maintenance of the household; its furnishings and equipment. Household budgets and accounts. This course will be given in conjunction with Management of the Home, and the credits are included in that course. (Murphy.)

H. E. 142 s. *Management of the Home* (5)—Six weeks' experience in keeping house in a household of six students. (Murphy.)

H. E. 143 f. *Marketing and Buying* (2)—One lecture; one laboratory.

Food budgets and accounts. Selection, purchasing, and care of foods for the family. Lectures will be given by specialists in the Department of Dairy Husbandry, Animal Husbandry, and Horticulture, in the College of Agriculture, on the choice and care of dairy products, meats, vegetables, and fruits. (Mount.)

H. E. 144 y. *Institutional Management* (6)—Three recitations.

The organization and management of institutional dining halls, dormitories, and laundries; and of commercial cafeterias, tea-rooms, and restaurants. (Mount.)

H. E. 145 f. *Practice in Institutional Management* (5)—Prerequisite, H. E. 144 y.

Practice work in the University Dining Hall, in a tea-room, or in a cafeteria. (Mount.)

H.E. 146 s. *Advanced Institutional Management* (3)—Prerequisite, H. E. 145 f. One recitation weekly and individual conferences with instructor.

Special problems in Institutional Management. (Mount.)

Home Economics Extension

H. E. 151 f. *Field Practice in Home Economics Extension* (5)—Given under direction of Miss Venia Kellar, State Home Demonstration Agent.

HOME ECONOMICS EDUCATION

PROFESSOR MCNAUGHTON; MISS BUCKEY.

H. E. ED. 100 s. *Education of Women* (4).

History of the family; the effect of civilization upon the organization of the home and the status of its members; educational opportunities for women; training for citizenship, professions, and the home. (McNaughton.)

H. E. ED. 101 y. *Teaching Secondary Vocational Home Economics: Methods and Practice* (6)—Prerequisite, Ed. 102.

Objectives of vocational home economics; the Smith-Hughes law and its administration; a survey of the needs of the high school girl; adaptation of the state course of study to the needs of the community; methods of instruction; use of the home project; use of illustrative material; improvement of home economics library; study of equipment; outline units of instruction; lesson plans; observation; participation teaching, conferences, and critiques. (McNaughton.)

H. E. ED. 102 f. *Child Study* (5).

Child psychology with observation in the Nursery Schools in Washington; books, games, and music for children; physical care; making of children's clothes. (McNaughton.)

HORTICULTURE

PROFESSORS AUCHTER, GEISE; ASSOCIATE PROFESSOR THURSTON; ASSISTANT PROFESSORS WHITEHOUSE, BOSWELL; MR. YODER.

A. Pomology

HORT. 1 f. *Elementary Pomology* (3)—Two lectures; one laboratory.

A general course in pomology. The proper location and site for an orchard are discussed. Varieties, planting plans, inter-crops, spraying, cultural methods, fertilizing methods, thinning, picking, packing, and marketing are also given consideration. The subjects are discussed for apples, peaches, pears, plums, cherries, and quinces. The principles of plant propagation as applied to pomology are discussed.

HORT. 2 f. *Systematic Pomology* (3)—Two lectures; one laboratory. Prerequisite, Hort. 1.

The history, botany, and classification of fruits and their adaptation to Maryland conditions. Exercises are given in describing and identifying the leading commercial varieties of fruits. Students are required to help set up the fruit show each year.

HORT. 3 f. *Advanced Practical Pomology* (1)—Senior year. Prerequisites, Hort. 1 and 101.

A trip occupying one week's time will be made through the principal fruit regions of eastern West Virginia, Maryland, and Pennsylvania. A visit to the fruit markets of several large cities will be made. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

HORT. 4 s. *Small Fruit Culture* (2)—One lecture; one laboratory. Not offered in 1929-1930.

The care and management of small fruit plantations. Varieties and their adaptation to Maryland soils and climate, packing, marketing, and a study of the experimental plots and varieties on the Station grounds. The following fruits are discussed: the grape, strawberry, blackberry, blackcap raspberry, red raspberry, currant, gooseberry, dewberry, and loganberry.

HORT. 5 f. *Fruits and Vegetable Judging* (2)—Two laboratories. Prerequisites, Hort. 1 and 11.

A course designed to train men for fruit-judging teams and practical judging. Students are required to know at least one hundred varieties of fruit, and are given practice in judging single plates, largest and best col-

lections, boxes, barrels, and commercial exhibits of fruits and vegetables. Students are required to help set up the college horticultural show each year.

HORT. 6 f. *Advanced Fruit Judging* (1)—One laboratory. Prerequisite, Hort. 5.

B. Vegetable Crops

HORT. 11 s. *Principles of Vegetable Culture* (3)—Two lectures; one laboratory.

A study of fundamental principles underlying all garden practices. Each student is given a small garden to plant, cultivate, spray, fertilize, harvest, etc.

HORT. 12 f. *Truck Crop Production* (3)—Three lectures. Prerequisite, Hort. 11.

A study of methods used in commercial vegetable production. Each individual crop is discussed in detail. Trips are made to large commercial gardens, various markets, and other places of interest.

HORT. 13 s. *Vegetable Forcing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 11. Not offered in 1929-1930.

All vegetables used for forcing are considered. Laboratory work in sterilization and preparation of soils, cultivation, regulation of temperature and humidity, watering, training, pruning, pollination, harvesting, and packing.

C. Floriculture

HORT. 21 s. *General Floriculture* (2)—One lecture; one laboratory.

The management of greenhouse; the production and marketing of florists' crops; retail methods; plants for house and garden. Not offered in 1929-1930.

HORT. 22 y. *Greenhouse Management* (6)—Two lectures; one laboratory.

A consideration of the methods employed in the management of greenhouses, including the operations of potting, watering, ventilating, fumigation, and methods of propagation. Not given in 1929-1930.

HORT. 23 y. *Floricultural Practice* (4)—Two laboratories.

Practical experience in the various greenhouse operations of the fall, winter, and spring seasons.

HORT. 24 s. *Greenhouse Construction* (2)—One lecture; one laboratory.

The various types of houses; their location, arrangement, construction, and cost; principles and methods of heating; preparation of plans and specifications for commercial and private ranges. Not offered in 1929-1930.

HORT. 25 y. *Commercial Floriculture* (6)—Two lectures; one laboratory. Prerequisite, Hort. 22.

Cultural methods of florists' bench crops and potted plants, the marketing of the cut flowers, the retail store, a study of floral decoration. Not offered in 1928-1929.

HORT. 26 f. *Garden Flowers* (3)—Two lectures; one laboratory.

Plants for garden use; the various species of annuals, herbaceous perennials, bulbs, bedding plants and roses and their cultural requirements. Not offered in 1929-1930.

HORT. 27 s. *Floricultural Trip* (1)—Prerequisite, Hort. 22.

A trip occupying one week's time will be made through the principal floricultural sections, including Philadelphia and New York, visiting greenhouse establishments, wholesale markets, retail stores, nurseries, etc. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

D. Landscape Gardening

HORT. 31 s. *General Landscape Gardening* (2)—Two lectures.

The theory and general principles of landscape gardening and their application to private and public areas. Special consideration is given to the improvement and beautification of the home grounds, farmsteads, and small suburban properties. Adapted to students not intending to specialize in landscape, but who wish some theoretical and practical knowledge of the subject. Not offered in 1928-1929.

HORT. 32 f. *Elements of Landscape Design* (3)—One lecture; two laboratories. Prerequisite, Hort. 31.

A consideration of the principles of landscape design; surveys, mapping, and field work. Not offered in 1929-1930.

Hort. 33 s. Landscape Design (3)—Three laboratories. Prerequisite, Hort. 32.

The design of private grounds and gardens and of architectural details used in landscape; planting plans; analytical study of plans of practicing landscape architects; field observation of landscape developments. Not offered in 1929-1930.

HORT. 34 f. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 33.

Continuation of course as outlined above. Not offered in 1928-1929.

HORT. 35 f. *History of Landscape Gardening* (1)—One lecture. Prerequisite, Hort. 31.

Evolution and development of landscape gardening; the different styles and a particular consideration of Italian, English, and American gardens. Not offered in 1929-1930.

HORT. 36 f. *Landscape Construction and Maintenance* (1)—One lecture or laboratory.

Methods of construction and planting; estimating; park and estate maintenance. Not offered in 1928-1929.

Hort. 37 s. *Civic Art* (2)—One lecture; one laboratory.

Principles of city planning and their application to village and rural improvement, including problems in design of civic center, parks, school grounds, and other public and semi-public areas. Not offered in 1928-1929.

E. General Horticultural Courses

HORT. 41 s. *Horticultural Breeding Practices* (1)—One laboratory. Senior year. Prerequisites, Genetics (Gen. 101), Plant Phys. 1.

Practice in plant breeding, including pollination, hybridization, selection, note-taking, and the general application of the theories of heredity and selection to practice are taken up in this course.

HORT. 42 y. *Horticultural Research and Thesis* (4-6).

Advanced students in any of the four divisions of horticulture may select some special problem for individual investigation. This may be either the summarizing of all the available knowledge on a particular problem or the investigation of some new problem. Where original investigation is carried on, students should in most cases start the work during the junior year. The results of the research work are to be presented in the form of a thesis and filed in the horticultural library.

HORT. 43 y. *Horticultural Seminar* (2).

In this course papers are read by members of the class upon subjects pertaining to their research or thesis work or upon special problems assigned them. Discussions of special topics are given from time to time by members of the departmental staff.

For Advanced Undergraduates and Graduates

HORT. 101 f. *Commercial Fruit Growing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 1.

The proper management of commercial orchards in Maryland. Advanced work is taken up on the subject of orchard culture, orchard fertilization, picking, packing, marketing, and storing of fruits; orchard by-products, orchard heating, and orchard economics. (Whitehouse.) Not offered in 1928-1929.

HORT. 102 f. *Economic Fruits of the World* (2)—Two lectures. Prerequisites, Hort. 1 and Hort. 101.

A study is made of the botanical, ecological, and physiological characteristics of all species of fruit-bearing plants of economic importance, such as the date, pineapple, fig, olive, banana, nut bearing trees, citrus fruits, and newly-introduced fruits, with special reference to their cultural requirements in certain parts of the United States and the insular possessions. All fruits are discussed in this course which have not been discussed in a previous course. (Whitehouse.) Not offered in 1928-1929.

HORT. 103 f. *Tuber and Root Crops* (2)—One lecture; one laboratory. Prerequisites, Hort. 11 and 12. Not offered in 1929-1930.

A study of white potatoes and sweet potatoes, considering seed, varieties, propagation, soils, fertilizers, planting, cultivation, spraying, harvesting, storing, and marketing. (Boswell.)

HORT. 104 s. *Advanced Truck Crop Production* (1)—Prerequisites, Hort. 11, 12, and 13.

A trip of one week is made to the commercial trucking section of Maryland, Delaware, New Jersey, and Pennsylvania. A study of the markets in

several large cities is included in this trip. Students are required to hand in a detailed report of this trip. The cost of such a trip should not exceed thirty dollars per student. The time will be arranged each year with each class. (Boswell.)

HORT. 105 f. *Systematic Olericulture* (3)—Two lectures; one laboratory. Prerequisites, Hort. 11 and 103. Not offered in 1928-1929.

A study of the classification and nomenclature of vegetables. Descriptions of varieties and adaptation of varieties to different environmental conditions. (Boswell.)

HORT. 106 y. *Plant Materials* (5)—One lecture; one or two laboratories. Not offered in 1928-1929.

A field and laboratory study of trees, shrubs, and vines used in ornamental planting. (Thurston.)

For Graduates

HORT. 201 y. *Experimental Pomology* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practices in pomology; methods and difficulties in experimental work in pomology and results of experiments that have been or are being conducted in all experiment stations in this and other countries. (Auchter.)

HORT. 202 y. *Experimental Olericulture* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practices in vegetable growing; methods and difficulties in experimental work in vegetable production and results of experiments that have been, or are being conducted in all experiment stations in this and other countries. (Boswell.)

HORT. 203 s. *Experimental Floriculture* (2)—Two lectures.

A systematic study of the sources of knowledge and opinions as to practice in floriculture are discussed in this course. The results of all experimental work in floriculture which have been, or are being conducted, will be thoroughly discussed. (Thurston.)

HORT. 204 s. *Methods of Research* (2)—One lecture; one laboratory.

For graduate students only. Special drill will be given in the making of briefs and outlines of research problems, in methods of procedure in conducting investigational work, and in the preparation of bulletins and reports. A study of the origin, development, and growth of horticultural research is taken up. A study of the research problems being conducted by the Department of Horticulture will be made, and students will be required to take notes on some of the experimental work in the field and become familiar with the manner of filing and cataloging all experimental work. (Auchter.)

HORT. 205 y. *Advanced Horticultural Research and Thesis* (4, 6, or 8).

Graduate students will be required to select problems for original research in pomology, vegetable gardening, floriculture, or landscape gardening. These problems will be continued until completed and final results are to be published in the form of a thesis. (Auchter, Geise, Schrader, Boswell.)

HORT. 206 y. *Advanced Horticultural Seminar* (2).

This course will be required of all graduate students. Students will be required to give reports either on special topics assigned them, or on the progress of their work being done in courses. Members of the departmental staff will report special research work from time to time. (Auchter, Boswell.)

Requirements of Graduate Students in Horticulture

Pomology—Graduate students specializing in Pomology who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 1, 2, 101, 102, 201, 204, 205, and 206; General Bio-chemistry 102; Plant Bio-chemistry 201; Plant Bio-physics 202; Advanced Plant Physiology 101, and Organic Chemistry 8 y.

Olericulture—Graduate students specializing in vegetable gardening, who are planning to take an advanced degree, will be required either to take or offer the equivalent of the following courses: Hort. 12, 13, 103, 105, 202, 204, 205, and 206; General Bio-chemistry 102; Plant Bio-chemistry 201; Plant Bio-physics 202; Advanced Plant Physiology 101, and Organic Chemistry 8 y.

Floriculture—Graduate students specializing in floriculture, who are planning to take an advanced degree, will be required to take or offer the equivalent of the following courses: Hort. 22, 23, 24, 25, 26, 203, 204, 205, and 206; General Bio-chemistry 102; Plant Bio-physics 202; Plant Bio-chemistry 201; Botany 103, and Organic Chemistry 8 y.

Landscape Gardening—Graduate students specializing in landscape gardening, who are planning to take an advanced degree, will be required to take or offer the equivalent of the following courses: Hort. 32, 33, 35, 105, 204, and 206; Botany 103; Drafting 1 and 2, and Plane Surveying 1 and 2.

Additional Requirements—In addition to the above required courses, all graduate students in horticulture are advised to take physical and colloidal chemistry.

Unless graduate students in Horticulture have had some course work in entomology, plant pathology, genetics, and biometry, certain of these courses will be required.

LATIN

PROFESSOR SPENCE.

LAT. 1 f. *Elementary Latin* (4)—Four lectures.

This course is offered to cover a substantial and accurate course in Grammar and Syntax, with translation of simple prose. It is substantially the equivalent of one entrance unit in Latin.

LAT. 2 s. *Translation and Prose Composition* (4)—Four lectures. Prerequisite, Lat. 1 f or its equivalent. Substantially the equivalent of a second entrance unit in Latin.

Texts will be selected from the works of Caesar and Sallust.

LAT. 3 f. (4)—Four lectures. Prerequisite, Lat. 2 s, or two entrance units in Latin.

Texts will be selected from Virgil, with drill on prosody.

LAT. 4 s. (4)—Four lectures. Prerequisite, Lat. 3 f or three entrance units in Latin.

Selections from Cicero's orations, with parallel reading of the world's masterpieces of oratory.

LAT. 5 f. (3)—Three lectures. Prerequisite, Lat. 3 f. and 4 s.

Histories of Livy, with parallel reading of Napoleon's campaign in Italy.

LAT. 6 s. (3)—Three lectures. Prerequisites, Lat. 3 f and 4 s.

Odes and Epodes of Horace, with appropriate study of prosody.

For Advanced Undergraduates and Graduates

LAT. 101 f. (3)—Three lectures. Prerequisites, Lat. 3 f and 4 s.

The writings of Tacitus. Selected Plays of Terence and Plautus. (Spence.)

LAT. 102 s. (3)—Three lectures. Prerequisites, Lat. 3 f and 4 s.

Satires of Juvenal and Horace. (May be omitted 1928-1929.) (Spence.)

LAT. 103 s. *Classical Literature* (3)—Three lectures. Knowledge of Greek or Latin desirable, but not essential.

Study and criticism of translations of the classics, biographies of classic authors. (Spence.)

LIBRARY SCIENCE

MISS GRACE BARNES, MISS GERTRUDE BERGMAN.

L. S. 1 f. *Library Methods* (1)—Freshman year. Required of all students registered in the College of Arts and Sciences. Elective for others.

This course is intended to help students use the library with greater facility. Instruction will be given by practical work with the various catalogs, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much-used reference books which the student will find helpful throughout his college course.

MATHEMATICS

PROFESSORS T. H. TALIAFERRO, GWINNER; ASSISTANT PROFESSORS SPANN, DANTZIG; MR. PYLE.

MATH. 1 f. *Algebra* (3)—Three lectures. Required of Pre-medical, Business Administration, and certain Chemistry students. Alternative for students in the College of Arts and Sciences. Elective for other students. Prerequisite, Algebra to Quadratics.

This course includes the study of quadratics, simultaneous quadratic equations, graphs, progression, elementary theory of equations, binomial theorem, permutations, combinations, etc.

MATH. 2 s. *Plane Trigonometry* (3)—Three lectures. Required of Premedical and certain Chemistry students. Alternative for students in the College of Arts and Sciences. Elective for other students. Prerequisites, Math. 1 f and Plane Geometry.

A study of the trigonometric functions and the deduction of formulas with their application to the solution of triangles and trigonometric equations.

MATH. 3 f. *Trigonometry; Advanced Algebra* (5)—Five lectures. Required of Freshmen in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisites, Algebra completed and Solid Geometry.

Advanced Algebra includes a rapid review of algebra required for entrance, elementary theory of equations, binomial theorem, permutations, combinations, and other selected topics.

Trigonometry includes trigonometric functions, the deduction of formulas and their application to the solution of plane triangles, trigonometric equations, spherical triangles, etc.

This course will be repeated during the second semester.

MATH. 4 s. *Analytic Geometry* (5)—Five lectures. Required of students in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisite, Math. 3 f.

This course includes a study of curve and equation, the straight line, the conic sections, empirical equations, transcendental curves. The plane and the straight line in space, and the quadric surfaces. An opportunity is afforded to take this course during the summer.

MATH. 5 f. *Plane Analytic Geometry* (3)—Three lectures. Required of students in Chemistry other than Industrial Chemistry. Elective for other students. Prerequisites, Math. 1 f and 2 s.

Plane analytic geometry includes the study of the loci of equations in two variables, the straight line, conic sections and transcedental curves, and the development of empirical equations from graphs.

MATH. 6 s. *Calculus* (3)—Three lectures. Required of students in Chemistry other than Industrial Chemistry. Elective for other students. Prerequisite, Math. 5 f.

Calculus includes the study of the methods of differentiation and integration and the application of these methods in determining maxima and minima, areas, lengths of curves, etc., in the plane.

MATH. 7 y. *Calculus; Elementary Differential Equations* (10)—Five lectures. Required of sophomores in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisite, Math. 4 s.

Calculus is studied throughout the year. In the second semester several weeks are devoted to the study of elementary differential equations.

Calculus includes a discussion of the methods of differentiation and integration and the application of these methods in determining maxima and

minima, areas, length of curves, etc., in the plane, and the determination of areas, volume, etc., in space.

For Advanced Undergraduates and Graduates

MATH. 101 f. *The Mathematical Theory of Investment* (3)—Three lectures. To be followed by Math. 102 s. Open to juniors and seniors. Required of students in Business Administration.

The application of mathematics to financial transactions; compound interest and discount, construction and use of interest tables, sinking funds, annuities, depreciation, valuation and amortization of securities, building and loan associations, life insurance, etc. (Dantzig.)

MATH. 102 s. *Elements of Statistics* (3)—Three lectures. A continuation of Math. 101. Prerequisite, Math. 101. Open to juniors and seniors. Required of students in Business Administration.

A study of the fundamental principles used in statistical investigation. (Dantzig.)

MATH. 103 f. *Differential Equations* (3)—Three lectures. Elective. Prerequisite, Math. 6 s or Math. 7 y.

Integration of ordinary differential equations. Total differential equations and partial differential equations are also considered. (Taliaferro.)

MATH. 104 s. *Differential Geometry* (3)—Three lectures. Elective. Prerequisite, Math. 6 s or 7 y.

Applications of the calculus to plane and skew curves. Theory of Surfaces. (Taliaferro.)

MATH. 105 f. *Advanced Algebra* (3)—Three lectures. Elective.

Matrices and determinants. Invariants. Linear Substitutions. Finite Groups, Quadratic Forms, Theory of Equations. (Taliaferro.)

MATH. 106 s. *Advanced Topics in Geometry* (3)—Three lectures. Elective.

Homogeneous Co-ordinates. Principles of Projective Geometry. Theory of Algebraic Curves. Infinite Groups. (Taliaferro.)

MATH. 107 f. *Functions of a Complex Variable* (3)—Three lectures. Elective.

Theory of Functions. Conformal Transformations. Development into Series. Applications to Integral Calculus. (Taliaferro.)

MATH. 108 s. *Vector Analysis* (3)—Three lectures. Elective.

Theory of Vectors. Tensors and Linear Vector Functions. Vector Fields. (Taliaferro.)

Not more than two of the Courses, 105 to 108, inclusive, will be given in any year.

MATH. 109 y. *Selected Topics in Mathematics.* (4)—Two lectures. Elective.

The purpose of the course is to enable advanced students in Physics, Chemistry, Biology, and Economics to understand such mathematics as is encountered in modern scientific literature in the fields named. The course begins with a review of general college mathematics from a mature stand-

point. Applications to various problems of thermodynamics, physical chemistry, economic and biometric statistics will be made for illustrative purposes. (Dantzig.)

MILITARY SCIENCE AND TACTICS

PROFESSOR LYTLE; ASSISTANT PROFESSORS SCOBEY, BOWES, MCMANUS; MR. HENDRICKS.

M. I. 1 y. *Basic R. O. T. C.* (2)—Freshman year.
The following subjects are covered:

First Semester

Military Courtesy, Command and Leadership, Physical Drill, Military Hygiene and First Aid.

Second Semester

Physical Drill, Military Hygiene and First Aid, Command and Leadership, Marksmanship.

M. I. 2 y. *Basic R. O. T. C.* (4)—Sophomore year.
The following subjects are covered:

First Semester

Musketry, Command and Leadership, Scouting and Patrolling.

Second Semester

Interior Guard Duty, Automatic Rifle, Command and Leadership.

M. I. 101 y. *Advanced R. O. T. C.* (6)—Junior year.
The following subjects are covered:

First Semester

Infantry Weapons (Machine Guns), Command and Leadership.

Second Semester

Infantry Weapons (Machine Guns), Military Sketching and Map Reading, Military Field Engineering, Command and Leadership, Combat Principles.

M. I. 102 y. *Advanced R. O. T. C.* (6)—Senior year.
The following subjects are covered:

First Semester

Combat Principles, Command and Leadership.

Second Semester

Combat Principles, Infantry Weapons (37 MM. Gun and 3-inch Trench Mortar), Administration, Command and Leadership, Military Law, Rules of Land Warfare, Military History, and National Defense Act.

MODERN LANGUAGES

PROFESSOR ZUCKER; ASSOCIATE PROFESSOR KRAMER; ASSISTANT PROFESSOR DEFERRARI; MISS STANLEY, MR. .....

In the elementary instruction in languages a differentiation is introduced between students whose chief interest lies in science and those who are studying a language for cultural purposes or with the aim of becoming teachers in this field. For the latter an additional two-hour course in pronunciation and conversation is offered in the second semester, while the former take only the three-hour course designed to give simply a reading knowledge.

Students in the College of Education and in the College of Arts and Sciences (except those carrying special curricula outlined in Section I) will not receive credit for the elementary language course unless they have successfully completed the full eight hours of the first year work.

A. French

FRENCH 1 y. *Elementary French* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in French for entrance, but whose preparation is not adequate for second-year French, receive half credit for this course.

Elements of grammar; composition, pronunciation, and translation.

FRENCH 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements Fr. 1 y. (See paragraph 2, Department of Modern Languages.) In it special emphasis is laid on pronunciation and conversation.

FRENCH 3 y. *Second-Year French* (6)—Three lectures. Prerequisite, French 1 y or equivalent.

Study of grammar continued; composition, conversation, translation. Texts selected from modern prose.

FRENCH 4 y. *The Development of the French Novel* (6)—Three lectures and reports.

Introductory study of the history and growth of the novel in French literature; of the lives, work, and influence of various novelists.

This course alternates with French 5 y.

FRENCH 5 y. *The Development of the French Drama* (6)—Three lectures and reports.

Introductory study of the French drama of the seventeenth, eighteenth, and nineteenth centuries. Translation and collateral reading.

This course alternates with French 4 y. (Not given 1928-1929.)

FRENCH 6 f. *Readings in Contemporary French* (3)—Two lectures.

Translation; collateral reading; reports on history, criticism, fiction, drama, lyric poetry.

FRENCH 7 s. *Readings in Contemporary French.* (Continuation of French 6 f.) (3)—Two lectures.

FRENCH 8 f. *French Phonetics and Pronunciation* (2)—Two lectures.

FRENCH 9 s. *French conversation and composition.* (2)—Two lectures.

For Advanced Undergraduates and Graduates

(French 4 y, 5 y, 6 f, and 7 s, or equivalent are prerequisite for courses in this group.)

FRENCH 101 f. *History of French Literature in the Seventeenth Century* (3)—Three lectures. (Deferrari.)

FRENCH 102 s. *History of French Literature in the Eighteenth Century.* (3)—Three lectures. (Deferrari.)

FRENCH 103 f. *History of French Literature in the Nineteenth Century* (3)—Three lectures. (Deferrari.) Not given 1928-1929.

FRENCH 104 s. *History of French Literature in the Nineteenth Century* (Continuation of French 103 f.) (3)—Three lectures. (Deferrari.) Not given 1928-1929.

For Graduates

FRENCH 201 y. *The Renaissance in France* (6)—Three lectures. (Deferrari.)

FRENCH 202 y. *Introduction to French Philology* (6)—Three lectures. (Deferrari.)

FRENCH 203 y. *Research and Thesis.* Credits determined by work accomplished. (Deferrari.)

Attention is also called to Comparative Literature 105, *Romanticism in France, Germany, and England.*

B. German

GERMAN 1 y. *Elementary German* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in German for entrance, but whose preparation is not adequate for secondary German, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

GERMAN 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements German 1 y (see paragraph 2, Department of Modern Languages). In it special emphasis is laid on pronunciation and conversation.

GERMAN 3 y. *Second-Year German* (6)—Three lectures. Prerequisite, German 1 y or equivalent.

Reading of narrative and technical prose, grammar review, oral and written practice.

GERMAN 4 f. *Advanced German* (3)—Three lectures. Prerequisite, German 3 y or equivalent.

Rapid reading of modern dramas and novels by Hauptmann, Sudermann, Fulda, Frenssen, Ernst, and others.

GERMAN 5 s. *Advanced German* (3)—Three lectures. Continuation of German 4 f.

For Advanced Undergraduates and Graduates

(Prerequisite for courses in this group, German 4 and 5 or equivalent.)

GERMAN 101 f. *German Literature of the Eighteenth Century* (3)—Three lectures. (Zucker.) The earlier classical literature.

GERMAN 102 s. *German Literature in the Eighteenth Century* (3)—Three lectures. (Zucker.) The later classical literature.

GERMAN 103 y. *German Literature of the Nineteenth Century* (6)—Three lectures. (Not given 1928-1929.) (Zucker.)

GERMAN 205 y. *Research and Thesis*—Credits determined by work accomplished. (Zucker.)

Attention is also called to Comparative Literature 105, *Romanticism in France, Germany, and England.*

C. Spanish

SPANISH 1 y. *Elementary Spanish* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in Spanish for entrance, but whose preparation is not adequate for second-year Spanish, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

SPANISH 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements Spanish 1 y (see paragraph 2, Department of Modern Languages.) In it special emphasis is laid on pronunciation and conversation.

SPANISH 3 y. *Second-Year Spanish* (6)—Three recitations. Prerequisite, Spanish 1 y or equivalent.

Reading of narrative works and plays; grammar review; oral and written practice.

SPANISH 4 y. *History of Spanish Literature* (6)—Three recitations. Prerequisite, Spanish 3 y or equivalent.

General survey of Spanish literature up to the Twentieth Century.

SPANISH 5 f. *Spanish Conversation and Composition* (2)—Two lectures.

SPANISH 6 s. *Spanish Conversation and Composition.* (Continuation of Spanish 5 f.) (2)—Two lectures.

For Advanced Undergraduates and Graduates

SPANISH 101 f. *Masterpieces of Spanish Literature* (3)—Three lectures. (Deferrari.)

SPANISH 102 s. *Masterpieces of Spanish Literature.* (Continuation of Spanish 101 f.) (3)—Three lectures. (Deferrari.)

SPANISH 103 y. *Introduction to Spanish Philology* (6)—Three lectures. (Deferrari.)

D. Comparative Literature

For Advanced Undergraduates and Graduates

The courses in Comparative Literature are, for the time being, under the direction of the Department of Modern Languages. They may be elected as partially satisfying major and minor requirements in this department. Comparative Literature 101, 104, and 105 may also be counted toward a major or minor in English.

COM. LIT. 101 f. *Introduction to Comparative Literature.* (3)—Three lectures.

Survey of the background of European literature through study in English translation of Greek and Latin literature. Special emphasis is laid on the development of the epic, tragedy, comedy, and other typical forms of literary expression. The debt of modern literature to the ancients is discussed and illustrated. (Zucker.)

COM. LIT. 102 s. *Introduction to Comparative Literature* (3)—Three lectures.

Continuation of 101 f; study of medieval and modern Continental literature. (Zucker.)

COM. LIT. 104 s. *The Modern Ibsen.* Lectures on the life of Ibsen and the European drama in the middle of the Nineteenth Century. Study of Ibsen's social and symbolical plays in Archer's translation. (Zucker.)

COM. LIT. 105 y. *Romanticism in France, Germany, and England* (6)—Two lectures and reports.

Introduction to the chief authors of the Romantic movement in England, France, and Germany, the latter two groups being read in English translation. Lectures on the chief thought currents and literary movements of the late eighteenth and early nineteenth centuries. First semester: Rousseau to Gautier; Buerger to Heine. Second semester: Wordsworth, Coleridge, Landor, Byron, Shelley, Keats, and others. The course is conducted by members of both the Modern Language and the English departments. (Deferrari, Zucker, Hale.)

MUSIC

PROFESSOR HOUSE; MR. GOODYEAR.

MUSIC 1 y. *Music Appreciation* (2).

A study of all types of classical music with a view to developing the ability to listen and enjoy. Lecture recitals will be presented with the aid of performers and records. A study of the orchestra, the instruments that it employs. The development of the symphony and orchestra instruments for solo performance. The development of the opera and oratorio. Great singers of the past and present. (Goodyear.)

MUSIC 2 y. *University Chorus* (2).

Study of part-songs, cantatas, and oratorios. Credit is awarded for regular attendance at weekly rehearsals, and participation in public preformances of the chorus.

Students admitted who have ability to read and sing music of the grade of easy church hymns. No student may receive more than four credits for work in University Chorus. (House.)

MUSIC 3 y. *University Orchestra* (1 credit for each semester satisfactorily completed).

The purpose of the University Orchestra is study of the classics. Works of the standard symphonists from Haydn and Mozart to Wagner and the modern composers are used. Students are eligible for membership who play orchestral instruments. At least one rehearsal of two hours duration is held each week, and all players are expected to take part in public performances. (Goodyear.)

(For courses in Voice and Piano, see under College of Arts and Sciences.)

MUSIC 4 f. *History of Music* (1)—One lecture.

A comprehensive course in the history of music covering the development of all forms of music from the ancient times through the period of the renaissance; the classic and the romantic schools and the more modern composers.

MUSIC 5 s. *Sight Reading* (1)—One lecture.

A course designed to teach all the fundamentals of sight reading. The tonic sol fa. This course enables the singer to become familiar with all key signatures and the intervals.

PHILOSOPHY

PROFESSOR SPENCE

For Advanced Undergraduates and Graduates

PHIL. 101 f. *Introduction to Philosophy* (3)—Three lectures and assignments.

A study of the meaning and scope of philosophy; its relations to the arts, sciences, and religion. To be followed by Phil. 102.

PHIL 102 s. *Problems and Systems of Philosophy* (3)—Three lectures and reports on the reading of representative works. Prerequisite, Phil. 101.

Study of the problems and systems of philosophy, together with tendencies of present-day thought.

PHIL. 104 y. *History of Philosophy* (6)—Three lectures. Senior standing required.

A study of the development of philosophy from prehistoric times, through Greek philosophy, early Christian philosophy, medieval philosophy to modern philosophical thought. (May be omitted 1928-1929.)

MYTH. 101 s. *Mythology* (1)—One lecture.

Origin and reason of folklore and myth. Comparison of myths, mythology, and modern thought.

PHYSICAL EDUCATION FOR WOMEN

MISS STAMP.

PHYS. ED. 1 y. *Physical Education and Personal Hygiene* (2)—Freshman course required of all women.

This course consists of instruction in hygiene, one period a week, and physical training activities, two periods a week throughout the year.

A. *Personal Hygiene.* The health ideal and its attainment; care of the body relative to diet, exercise, sleep, bathing, etc., and social hygiene.

B. *Physical Activities.* The aim is to adapt the physical activities to the needs of groups and individuals. Gymnastic practice, indoor and outdoor games, sports, and athletics are provided. The repertory of games and sports is as follows: basketball, hiking, rifle shooting, swimming, tennis, and track and field events.

PHYS. ED. 2 y. *Physical Education and General Hygiene* (4)—Sophomore course required of all women.

This course is a continuation of the freshman course. The work in hygiene includes the elements of physiology; the elements of home, school, community hygiene; and a continuation of social hygiene. The program of physical activities is essentially the same as in the first year.

PHYSICS

PROFESSOR EICHLIN; MR. COTTRELL.

PHYS. 1 y. *Arts Physics* (8)—Three lectures; one laboratory. Prerequisites, Math. 1 f and 2 s.

A study of the physical phenomena in mechanics, heat, sound, magnetism, electricity, and light. Required of students in the Pre-medical and Chemistry curricula. Elective for other students.

PHYS. 2 y. *Engineering Physics* (10)—Four lectures; one laboratory. Prerequisites, Math. 3 f and 4 s.

A study of mechanics, heat, sound, magnetism, electricity, and light. Required of all students in Engineering. Elective for other students.

PHYS. 3 s. *Special Applications of Physics* (4)—Three lectures; one laboratory.

This course consists of a discussion of the laws and theories of physics from the viewpoint of their practical applications. Especially for students in Home Economics.

PHYS. 4 y. *Physics Problems* (2)—One lecture. Prerequisite, Phys. 1 y.

A problem course supplementary to Phys. 1 y. Required of students in Chemistry with credit for Phys. 1 y.

For Advanced Undergraduates and Graduates

PHYS. 101 f. *Physical Measurements* (3)—Two lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

This course is designed for the study of physical measurements and for familiarizing the student with the manipulation of the types of apparatus used in experimentation in physical problems. (Cottrell.)

PHYS. 102 y. *Graphic Physics* (2)—One lecture. Prerequisite, Phys. 1 y or 2 y.

A study of physical laws and formulae by means of scales, charts, and graphs. (Eichlin.)

PHYS. 103 f. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of Mechanics and Molecular Physics. (Eichlin.)

PHYS. 104 s. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of wave motion, sound, and heat. (Eichlin.)

PHYS. 105 f. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of electricity and magnetism. (Not given in 1928-1929.)

PHYS. 106 s. *Advanced Physics* (3 or 4)—Three lectures; one laboratory. Prerequisite, Phys. 1 y or 2 y.

An advanced study of optics. (Not given in 1928-1929.)

PHYS. 107 y. *Specialized Physics* (6)—Three lectures. Prerequisite, Phys. 1 y or 2 y.

A study of physical phenomena in optics, spectroscopy, conduction of electricity through gases, etc. (Eichlin.)

For Graduates

PHYS. 201 y. *Modern Physics* (6)—Three lectures.

A study of some of the problems encountered in modern physics. (Eichlin.)

PLANT PATHOLOGY

PROFESSORS NORTON, TEMPLE; DR. JEHLE, MR. HUNTER, MR. MOYER.*

(For other Botanical Courses see Botany and Plant Physiology)

PLT. PATH. 1 f. *Diseases of Plants* (3)—Two lectures; one laboratory. Prerequisite, Gen. Bot. 1.

An introductory study in the field, in the laboratory, and in the literature, of symptoms, casual organisms, and control measures of the diseases of economic crops.

PLT. PATH. 2 s. *Forest Pathology* (1)—One lecture and an occasional field trip or laboratory period.

The diseases of forest trees of economic importance. Intended especially for students in forestry.

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* All on part time teaching.

For Advanced Undergraduates and Graduates

PLT. PATH. 101 s. *Diseases of Fruits* (2-4)—Two lectures; laboratory according to credit desired. Prerequisite, Plt. Path. 1. Not offered in 1928-1929.

An intensive study intended to give a rather thorough knowledge of the subject matter, such as is needed by those who expect to become advisers in fruit production, as well as those who expect to become specialists in plant pathology.

PLT. PATH. 102 s. *Diseases of Garden and Field Crops* (2-4)—Two lectures; laboratory according to credit desired. Prerequisite, Plt. Path. 1.

The diseases of garden crops, truck crops, cereal and forage crops. Intended for students of vegetable culture, agronomy, and plant pathology, and for those preparing for county agent work.

PLT. PATH. 103 f. *Research Methods* (2)—One conference and five hours of laboratory and library work. Prerequisite, Plt. Path. 1 or equivalent.

Technique of plant disease investigations: sterilization, culture media, isolation of pathogens, inoculation methods, single-spore methods, disinfectants, fungicides, photography, preparation of manuscripts, and the literature in the scientific journals and bulletins on these subjects. (Temple.)

PLT. PATH. 104 f and s. *Minor Investigations*—Credit according to work done. A laboratory course with an occasional conference. Prerequisite, Plt. Path. 101 or a course in bacteriology.

In this course the student may enter or withdraw at any time, including the summer months, and receive credit for the work accomplished. The course is intended primarily to give practice in technique so that the student may acquire sufficient skill to undertake fundamental research. Only minor problems or special phases of major problems may be undertaken. Their solution may include a survey of the literature on the problem under investigation and both laboratory and field work. (Temple and Norton.)

PLT. PATH. 105 s. *Diseases of Ornamentals* (2)—One lecture; one laboratory.

The most important diseases of plants growing in greenhouse, flower garden, and landscape, including shrubs and shade trees. (Temple.)

PLT. PATH. 106 y. *Seminar* (1).

Conferences and reports on plant pathological literature and on recent investigations. (Temple.)

PLT. PATH. 107 f. *Plant Disease Control* (3)—Two lectures; one laboratory. Prerequisite, Plt. Path. 1. Not offered in 1928-1929.

An advanced course dealing with the theory and practice of plant disease control; the preparation of sprays and other fungicides and the testing of their toxicity in greenhouse and laboratory; demonstration and other extension methods adapted to county agent work and to the teaching of agriculture in high schools. (Jehle, Temple, Hunter.)

PLT. PATH. 108 f. *Plant Disease Identification*—Credit according to work accomplished. A laboratory and field study with conferences.

An extensive study of symptomatology and mycology leading to the identification of pathogens and the diseases caused by them. (Norton, Temple.)

PLT. PATH. 109 f or s. *Pathogenic Fungi* (2-5)—One lecture and one or more laboratory periods, according to credit. Prerequisites, Bot. 1 and Bact. 1.

A detailed treatment of the classification, morphology and economics of the fungi, with studies of life histories in culture; identification of field materials. (Norton.)

For Graduates

PLT. PATH. 201 f. *Virus Diseases* (2)—Two lectures.

An advanced course dealing with the mosaic and similar or related diseases of plants, including a study of the current literature on the subject and the working of a problem in the greenhouse. (Temple.)

PLT. PATH. 202 s. *Physiology of Parasitism* (2)—One lecture; one laboratory. Prerequisite, Plt. Path. 103 or equivalent.

A study of the physiological inter-relations of plant pathogens and their hosts.

PLT. PATH. 203 f. *Non-Parasitic Diseases* (2)—Two lectures. Not offered in 1928-1929.

Effects of maladjustment of plants to their environment; injuries due to climate, soil, gases, dusts and sprays, fertilizers; improper treatment and other detrimental conditions. (Norton.)

PLT. PATH. 204 s. *Literature of Plant Pathology* (2)—One conference and five hours of library work.

History and development of the science; scope and importance of the more outstanding botanical and plant pathological publications, including journals, bulletins, etc.; card catalogue of the workers, past and present day, and of their contributions; laboratories for research and for instruction. (Temple.)

PLT. PATH. 205 y. *Research*—Credit according to work done. (Norton, Temple.)

PLANT PHYSIOLOGY AND BIOCHEMISTRY

PROFESSOR APPLEMAN; ASSOCIATE PROFESSOR JOHNSTON; ASSISTANT PROFESSOR CONRAD; MR. SMITH.

(For other Botanical courses see Botany and Plant Pathology)

PLT. PHY. 1 f. *General Plant Physiology* (4)—Two lectures; two laboratories. Prerequisite, Gen. Bot. 1.

Water requirements, principles of absorption, mineral nutrients, transpiration, synthesis of food, metabolism, growth, and movements .

For Advanced Undergraduates and Graduates

PLT. PHY. 101 s. *Plant Ecology* (3)—One lecture; two laboratories. Prerequisite, Bot. 1.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated. Much of the work, especially the practical, must be carried on in the field, and for this purpose type regions adjacent to the University are selected.

BIOCHEM. 102 f. *General Biochemistry* (4)—Two lectures; two laboratories. Prerequisites, Gen'l Chem. 1, Analyt. Chem. 3 or their equivalents; also an elementary knowledge of organic chemistry.

A general course in chemical biology treated from the point of view of both plants and animals. The first half of the course is devoted to the chemistry of protoplasm and its products. The second half of the course deals with cell metabolism, and embraces processes and problems of fundamental importance in both animal and plant life. Not given every year. (Appleman, Conrad.)

PLT. PHYS. 103 f. *Plant Microchemistry* (2)—One lecture; one laboratory. Prerequisites, Bot. 1, Chem. 1, or equivalents.

The isolation, identification, and localization of organic and inorganic substances found in plant tissues by micro-technical methods. The use of these methods in the study of metabolism in plants is emphasized. (Conrad.)

For Graduates

PLT. PHYS. 201 s. *Plant Biochemistry* (3)—Two lectures; one laboratory. Prerequisites, Biochem. 102 and an elementary knowledge of plant physiology.

An advanced course on the chemistry of plant life. It deals with materials and processes characteristic of plant life. Primary syntheses and the transformations of materials in plants and plant organs are especially emphasized. (Appleman, Conrad.)

PLT. PHYS. 202 s. *Plant Biophysics* (3)—Two lectures; one laboratory. Prerequisites, one year's work in physics and an elementary knowledge of physical chemistry and plant physiology.

An advanced study of the operation of physical forces in plant physiological processes. The relation of climatic conditions to plant growth and practice in recording meteorological data constitute a part of the course. (Johnston.)

PLT. PHYS. 203 s. *Special Problems of Growth and Development* (2)—Not given every year. (Appleman, Johnston.)

PLT. PHYS. 204 y. *Seminar* (2).

The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advances in the subject.

PLT. PHYS. 205 y. *Research*—Credit hours according to work done.

Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Appleman, Johnston.)

POULTRY HUSBANDRY

PROFESSOR WAITE, ASSISTANT PROFESSOR QUIGLEY.

POULTRY 1 s and 101 s. *Farm Poultry* (3)—Two lectures; one laboratory.

A general course in poultry raising, including housing, feeding, incubation, brooding, breeds, breeding, selection of stock, culling, general management and marketing.

POULTRY 102 f. *Poultry Keeping* (4)—Two lectures; two laboratories. Prerequisite, Poultry 101.

A study of housing and yarding, practice in making poultry house plans, feeding, killing, and dressing.

POULTRY 103 s. *Poultry Production* (4)—Two lectures; two laboratories. Prerequisite, Poultry 101 and 102.

The theory and practice of incubation and brooding, both natural and artificial. Study of incubators and brooders, assembling, etc. Considerable stress will be placed on the proper growing of chicks into good laying pullets. General consideration of poultry disease. Caponizing.

POULTRY 104 f. *Poultry Breeds* (4)—Two lectures; two laboratories. Prerequisite, Poultry 101, 102, and 103.

A study of the breeds of poultry, the judging of poultry, fitting for exhibition, and the methods of improvement by breeding.

POULTRY 105 s. *Poultry Management* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101, 102, 103, and 104.

A general fitting together and assembling of knowledge gained in the previous courses. Culling, marketing, including both selling of poultry products and the buying of supplies, keeping poultry accounts, a study of poultry profits, how to start.

PSYCHOLOGY

ASSISTANT PROFESSOR SPROWLS.

PSYCH. 1 f or s. *Elements of Psychology* (3)—Two lectures and one conference. Seniors in this course receive but two credits.

The concept of consciousness as dependent upon the reactions of the individual is applied to the problems of human behavior. In this course the fundamental facts and principles of mental life are presented as a basis, not only for better understanding the behavior of others, but also for the intelligent use of individual capacities and the formation of desirable personality and character traits. This course is given in both the first and second semesters.

For Advanced Undergraduates and Graduates

PSYCH. 101 s. *Social Psychology* (3)—Prerequisite, Psych. 1 or equivalent.

The social aspects of the individual; personality; social attitudes and adjustments; social control; fashion, convention, custom, public opinion, etc.,

are considered as individual responses to social stimulation. (Sprowls.) Given in 1928-1929.

PSYCH. 102 s. *Applied Psychology* (3)—Prerequisite, Psych. 1 or equivalent.

This course is designed to introduce the student to the applications of Psychology in business and industry. Special emphasis is given to the methods of selection and placement of employees and their individual adjustment. (Sprowls.)

See "Education" for description of the following courses:

ED. 101 f. *Educational Psychology* (3).

ED. 106 s. *Advanced Educational Psychology* (3).

ED. 107 f. *Educational Measurements* (3).

ED. 108 s. *Mental Hygiene* (3).

PUBLIC SPEAKING

PROFESSOR RICHARDSON; MR. WATKINS.

P. S. 1 y. *Reading and Speaking* (2)—One lecture.

The principles and technique of oral expression; enunciation, emphasis, inflection, force, gesture, and general delivery of short speeches. Impromptu speaking. Theory and practice of parliamentary procedure.

P. S. 2 f. *Advanced Public Speaking* (2)—Two lectures.

Advanced work on basis of P. S. 1, with special applications and adaptations. At each session of the class a special setting is given for the speeches—civil, social, and political organizations, etc., and organizations in the field of the prospective vocation of the different students. When a student has finished this course he will have prepared and delivered one or more speeches which would be suitable and appropriate before any and all bodies that he would probably have occasion to address in after-life.

P. S. 3 y. *Oral Technical English* (2)—One lecture.

The preparation and delivery of speeches, reports, etc., on both technical and general subjects. Argumentation. This course is especially adapted to the needs of engineering students and is co-ordinated with the seminars of the College of Engineering.

P. S. 4 y. *Advanced Oral Technical English* (2)—One lecture.

This course is a continuation with advanced work of P. S. 3 y. Much attention is given to Parliamentary Procedure. Some of the class programs are prepared by the students and carried out under student supervision. For junior engineering students only.

P. S. 5 y. *Advanced Oral Technical English* (2)—One lecture.

Advanced work on the basis of P. S. 4 y. Work not confined to class room. Students are encouraged to deliver addresses before different bodies in the University and elsewhere. For senior engineering students only.

P. S. 7 f. *Extempore Speaking* (1)—One lecture.

Much emphasis on the selection and organization of material. Class exercises in speaking extemporaneously on assigned and selected subjects. Newspaper and magazine reading essential.

P. S. 8 s. *Extempore Speaking* (1)—One lecture.

Continuation of P. S. 7 f.

P. S. 9 f. *Debate* (2)—Two lectures.

A study of the principles of argumentation. A study of masterpieces in argumentative oratory. Class work in debating. It is advised that those who aspire to intercollegiate debating should take this course.

P. S. 10 s. *Argumentation* (2)—Two lectures.

Theory and practice of argumentation and debate. Similar to course P. S. 9 f. This course is offered for the benefit of those who may find it impracticable to take this work in the first semester.

P. S. 11 f. *Oral Reading* (2)—Two lectures.

A study of the technique of vocal expression. The oral interpretation of literature. The practical training of students in the art of reading.

P. S. 12 s. *Oral Reading* (2)—Two lectures.

Continuation of P. S. 11.

ZOOLOGY AND AQUICULTURE

PROFESSORS PIERSON, TRUITT; ASSISTANT PROFESSOR MCCONNELL; MR. BURHOE.

ZOOL 1 f or s. *General Zoology* (4)—Two lectures; two laboratories.

This course is cultural and practical in its aims. It deals with the basic principles of animal development, morphology, relationships, and activities which are valuable for a proper appreciation of the biological and the social sciences.

ZOOL. 2 f. *General Zoology for Pre-Medical Students* (4)—Two lectures; two laboratories.

ZOOL. 3 s. *General Zoology for Pre-Medical Students* (4)—Two lectures; two laboratories. Prerequisite, Zool. 1 or Zool. 2.

ZOOL. 4 s. *Economic Zoology* (2)—Two lectures. Prerequisite, one course in Zoology or Botany 1.

The content of this course will center around the problems of preservation, conservation, control, and development of the economic wild life of Maryland, especially the blue crab and oyster. The lectures will be supplemented by assigned readings and reports.

ZOOL. 5 f. *The Invertebrates* (3)—One lecture; two laboratories. Prerequisite, Zool 1.

This course consists in a study of the morphology and relationships of the principal invertebrate phyla.

ZOOL. 6 s. *Field Zoology* (3)—One lecture; two laboratories.

This course consists in collecting and studying both land and aquatic forms of nearby woods, fields, and streams, with special emphasis placed upon insects and certain vertebrates, their breeding habits, environment, and economic importance.

ZOOL. 8 f. *Comparative Vertebrate Morphology* (4)—Two lectures; two laboratories. Prerequisite, Zool. 1 or Zool. 6. Required of pre-medical students.

ZOOL. 12 s. *Normal Animal Histology* (3)—One lecture; two laboratories. Prerequisite, Zool. 1 or equivalent.

Instruction in the simplest processes of technique will accompany the study of prepared material.

ZOOL. 16 f or s. *Advanced Comparative Vertebrate Morphology* (2)—Two laboratories. Schedule to be arranged. Prerequisite, Zool. 8 or its equivalent.

This is a continuation of Zool. 8, but will consist of laboratory work only.

For Advanced Undergraduates and Graduates

ZOOL. 101 s. *Embryology* (4)—Two lectures; two laboratories. Prerequisites, two semesters of biology, one of which should be Zool. 1 or 2. Required of three-year pre-medical students.

This course covers the development of the chick to the end of the fourth day. (Pierson, McConnell.)

ZOOL. 102 y. *Mammalian Anatomy* (2-3)—A laboratory course. Prerequisite, one year of zoology.

A thorough study of the gross anatomy of the cat or other mammal. Open to a limited number of students. The permission of the instructor in charge should be obtained before registering for this course. Schedule to be arranged. (Pierson.)

ZOOL. 105 y. *Aquiculture* (2)—Lectures and laboratory to be arranged. Prerequisites, Zool. 1 or 2 and Bot 1.

Plankton studies and the determination of other aquatic life of nearby streams and ponds. Morphology and ecology of representative commercial and game fishes in Maryland, the Chesapeake blue crab, and the oyster. (Truitt.)

ZOOL. 110 s. *Organic Evolution* (2)—Two lectures. Prerequisites, two semesters of biological science, one of which must be Zool. 1, 2, or 6.

The object of this course is to present the biological data on which the theories of evolution rest. The lectures will be supplemented by discussion, reports, and collateral reading. (Pierson.)

ZOOL. 115 y. *Vertebrate Zoology*—Credit hours and schedule to be arranged to suit the individual members of the class.

Each student may choose, within certain limits, a problem in taxonomy, morphology, or embryology. (Pierson, McConnell.)

ZOOL. 120 s. *Genetics* (2)—Two lectures. Prerequisite, Zool. 1 or 2, or Bot. 1.

A general introductory course designed to acquaint the student with the fundamental principles of heredity and variation. While primarily of interest to students of biology, it will be of value to those interested in the humanities. (Burhoe.)

ZOOL. 140. *Marine Zoology*—Credit to be arranged.

This work is given at the Chesapeake Laboratory, which is conducted cooperatively by the Maryland Conservation Department and the Department of Zoology and Aquiculture, on Solomons Island, where the research is directed primarily toward those problems concerned with commercial forms, especially the blue crab and the oyster. The work starts during the third week of June and continues until mid-September, thus affording ample time to investigate complete cycles in life histories, ecological relationships, and plankton contents. Course limited to few students, whose selection will be made from records and recommendations submitted with applications, which should be filed on or before June 1st.

Laboratory facilities, boats of various types fully equipped (pumps, nets, dredges, and other apparatus) and shallow water collecting devices are available for the work without extra cost to the student. (Truitt.)

GENETICS 101 f. (See page 191).

For Graduates

ZOOL. 200 y. *Zoology Problems.* (Pierson, Truitt, McConnell.)

SECTION IV.
DEGREES, HONORS, STUDENT REGISTER
DEGREES CONFERRED, 1927

HONORARY DEGREES

SIR JOHN RUSSELL, Doctor of Science
REVEREND SAMUEL TAGART STEELE, JR., Doctor of Divinity

HONORARY CERTIFICATES OF MERIT

ALEXANDER GUDE

THOMAS PARRAN

THE GRADUATE SCHOOL

Doctor of Philosophy

PERLEY FLOYD BROOKENS
B. A. University of South Dakota, 1917.

Dissertation:
"Foreign Competition in the Dairy Industry of the United States."

ALBERT LAWRENCE FLENNER
B. S. Gettysburg College, 1920.
M. S. University of Maryland, 1924.

Dissertation:
"The Relative Electronegativity of Organic Radicals and its Use in Interpreting Certain Organic Reactions."

DANIEL THOMAS ORDEMAN
B. A. Washington and Lee University, 1920.
M. A. Washington and Lee University, 1922.

Dissertation:
"Adverbs and Adverbial Constructions in 'Beowulf'."

EMIL GASTON VANDENBOSCHE
B. A. Lebanon Valley College, 1922.
M. S. University of Maryland, 1924.

Dissertation:
"The Potential of the Nickel Electrode."

Master of Arts

EDWIN MARION BARRON
EUGENIA W. CLEMENT
BESS MARY CRIDER
RUTH ALLISON HUDNUT CROTHERS
LIONEL BEVERLY HOWLAND
PAUL ELISHA HUFFINGTON
JOSEPH THOMAS PYLES, JR.
MARY ERNESTINE SAVAGE
WALLACE VICTOR SMITH

Master of Science

BENJAMIN H. BENNETT
ARTHUR CHARLES DILLMAN
RUTH BAILEY ENGLE
HULDAH ELIZABETH ENSOR
JOHN EDGAR FABER, JR.
WILLIAM A. HAMBRIGHT
JOSEPH DARLINGTON HOOPES
CHARLES ARCHER JONES
WILLIAM LESLIE KERR
PAUL KNIGHT
SAMUEL LIEBERMAN
HAROLD HENRY SHEPARD
CHARLES LINTON SMITH
WILLIAM CARLTON SUPPLEE
EARNEST ARTMAN WALKER
MILTON STEWART WHALEY
I. EVAN WHEATON

COLLEGE OF AGRICULTURE

Bachelor of Science

GEORGE JENVEY ABRAMS
CHARLES LESLIE BENNETT
GEORGE EMERSON BISHOFF
THOMAS STEVENSON BOWYER
C. S. BRINSFIELD, JR.
RAFAEL A. CHAVARRIA
RICHARD EDWIN COFFMAN
CECIL F. COLE, JR.
MARIAN HELEN MCGILL CONNER
HARRY THOMAS COTTMAN
SAMUEL LELAND CROSTHWAIT
DAVID DALLAS, JR.
MYLO SNAVELY DOWNEY
NORWOOD AUGUSTUS EATON
PAUL BENJAMIN GUNBY
WARREN THORNTON HIGGINS
CHARLES ALOYSIUS JOHNSTON
JOHN GERARD KREIN
HENRY L. MCCABE
WILLIAM HEMPSTONE MOORE
ALTON EVERETT NOCK
ENGELBERT HERRLING SCHMIDT
GEORGE MYRON SHEAR
NORWOOD CHARLES THORNTON
GEORGE MELVILLE WORRILOW
HENRY E. YOST

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

RACHEL BELLE ATKINSON
GEORGE M. BAUMGARDNER
EUGENE IRVING BAUMGARTNER
CHARLES CLARKE BEACH
JULIA LOUISE BEHRING
RUDOLPH BERKOWITZ
LUTHER F. BROMLEY
JOHN HOWARD BURNS
ELIZABETH GILBERT CHAFFINCH
LELAND HANEY CHEEK
WILLIAM ALFRED FISHER
HARRY MERRILL FLAXMAN
*KARL BLACKWELL FRAZIER
SOLOMON IRVING GINEWSKY
MAXINE HEISS
FRED CONRAD HERZOG
WILLIAM SASSCER HILL, JR.
JOHN HARLAN HORNBAKER
MARIUS PITKIN JOHNSON
HARRY JAMES KELCHNER
WILBUR MUNRO LEAF
ROBERT BURNESTON LUCKEY
MARY WINIFRED MCMINIMY
GEORGE EDWARD MELCHIOR, JR.
*JAMES ALTON MILLER
ALEXANDER A. MUZZEY
LILLIAN BLAND NEVITT
ROGER O'DONNELL, JR.
CECIL LOY PROPST
*TERRENCE G. RILEY

*Degrees conferred after June, 1927

Edwin Early Rothgeb
Eleanor Campbell Seal
Olive Marion Seltzer
Leroy Waters Sheriff
J. Linwood Parks Shipley
Wilbur Newman Snyder
Mary Spence
Kathryn Claire Stevenson
Elizabeth Josephine Taylor
Frank Hewey Terhune
*Egbert Fuller Tingley
Phillip Browne Truesdell
Alton Adam Wentzel
Robert James Wilson

Bachelor of Science

Elmer Arthur Beavens
Arthur Matthews Halper
Emmett H. Markwood
Milford Harsh Sprecher

Bachelor of Science in Arts and Nursing

Sister Mary Vincent de Paul Dunnigan
Sister Mary Hildegard Holbein

SCHOOL OF BUSINESS ADMINISTRATION

Bachelor of Science in Business

Charles William Hatter
Elizabeth C. Lyon
G. Emil Winroth

Certificates in Business

Samuel Fried
James J. Magee
John H. Neuman
L. Edward Parks
Reginald E. Robinson
George Rittenhouse Wallach
Max Yerman

SCHOOL OF DENTISTRY

Doctor of Dental Surgery

Samuel Abrams
Rafael Rodriguez Alvarez
John Apirian
Eugene Landis Baish
Carl Frederick Bock
Richard Hopkins Boggs
Robert A. Boggs, Jr.
Howard Rogers Burns
Harry Lewis Bush
Samuel Harold Byer
T. Joseph Cahill
Augustine Louis Cavallaro
Morris Edward Coberth
James Aloysius Condry
William P. Dailey
John Hudson Demarest
Francis Philip Donatelli
Brice Marden Dorsey
Almon Peter Doty
William W. Douglas
Walter Egbert Duryea, Jr.
James Webster Eagle
Arthur Bentley Ellor
Raymond Epstein
Dick H. Erwin
George Nelson Fenn
Avery Williams Fitch
John P. Fitzgerald
Lewis Fox
Charles A. Garverich
Sidney R. Graffam
Harry Griffin
Theodore Grotsky
Robert C. Hanna
L. Orville Herring
Frederick J. Hess
William Paul Hoffman
James Holdstock, Jr.

* Degrees conferred after June, 1927

Alwyn Hundley, Jr.
Frank Hurst
Kenneth Earl Hurst
Ralph L. Huth
John Miller Hyson
Joseph Austenous Jameson
Alexander Tunnel Jennette
Henry J. Karas
James A. Keefe
Frederick Joseph Kinch
Robert J. King
Walter Wilson Kirk
Isaac H. Koppel
Walter J. Lammers
Louis Lauer
Preston LeRoy McClain
James Francis McGann
J. Frank McGrail
Frank Paul McLay
Charles Anthony McMullen
Raymond Grantly Mackwiz
James Marrone
Marcolina Fernandez Martinez
Leon M. Mielcarek
Oliver Shipley Moore
William H. Morrison
Conrad W. Newberg
John Michael O'Boyle
Walter James O'Lone
Claret Arthur Oneacre
Richard Clayton Orrison
Joe Pharr
Adolph R. Prescher
Earle Tudhope Prouty
Joseph E. Quillen
Pierce Quirk
Albin Walter Rauch
Elwood B. Rider
Emilio Catasus Rodriguez
John P. Rohrbough
Walter E. Rohrabaugh
Jacob N. Rose
Charles Ruderman
Carl Purvis Russell
Louis Robert Schilling
Jacob Schwartz
Burke Jennings Shanklin
Richard Reynolds Shoaf
William A. Stewart
Juan Font Suarez
George H. Trinkle
Samuel Tuttle
Ernest John Weber
Ross Bond White
Clifford LeRoys Whitman
John Alexander Wierman
Samuel H. Wilde, Jr.
J. Paul Wintrup
Albert Woolfson
Benjamin Paul Yuckman

COLLEGE OF EDUCATION

Bachelor of Arts

Amos Bowlus Beachley
William Paul Beatty
Arthur Curtis Boyd
*Daniel Edward Corkran
Helen Custer
*Frank R. Davis
Elmore Roy Deibert
Elise Dorsey
*George Hamilton Fettus, Jr.
William C. Graham, Jr.
Julia Myrtle Hileman
Robert W. Hill
*Arvin Pary Jones
*John Francis McPartland
*James Benjamin Mills
Bernice Virginia Moler
Kenneth Petrie
*Marguerite Childress Reinmuth
Helen Gertrude Ryon
Naomi C. Ryon
M. B. Stevens
Viola Elizabeth Stewart
John Wilson Waters
Helen Rose White
Roger S. Whiteford
Alberta Alexandria Woodward
Philip Avery Wright
*Rubie Walker Youngblood

* Degrees conferred after June, 1927

Bachelor of Science

MIEL DAY BURGEE
WILLIAM LAWRENCE HOWARD
GLADYS MARIE MILLER
GRACE MARCELEAU WARNER

Teachers' Special Diploma

EDWARD MARION BARRON
AMOS BOWLUS BEACHLEY
WILLIAM PAUL BEATTY
GEORGE EMERSON BISHOFF
ARTHUR CURTIS BOYD
MIEL DAY BURGEE
HELEN CUSTER
ELMORE ROY DEIBERT
ELISE DORSEY
MYLO SNAVELEY DOWNEY
*GEORGE HAMILTON FETTUS, JR.
WILLIAM C. GRAHAM, JR.
MARY ETHEL GROVE
JULIA MYRTLE HILEMAN
ROBERT W. HILL
ARTHUR HOUSTON HOLLAND
WILLIAM LAWRENCE HOWARD
PAUL ELISHA HUFFINGTON
GLADYS MARIE MILLER
BERNICE VIRGINIA MOLER
WILLIAM HEMPSTONE MOORE
ALEXANDER A. MUZZEY
KENNETH PETRIE
HELEN GERTRUDE RYON
NAOMI C. RYON
OLIVE MARION SELTZER
ALMA DOROTHY SHIPLEY
WALLACE VICTOR SMITH
MARY SPENCE
M. B. STEVENS
KATHRYN CLAIRE STEVENSON
VIOLA ELIZABETH STEWART
ELIZABETH JOSEPHINE TAYLOR
FRANK HEWEY TERHUNE
PHILLIP BROWNE TRUESDELL
GRACE MARCELEAU WARNER
JOHN WILSON WATERS
ROGER S. WHITEFORD
ALBERTA ALEXANDRIA WOODWARD
PHILIP AVERY WRIGHT
HENRY E. YOST

Certificates in Industrial Education

FRANK ALLEN BALSAM
JOHN ELMER ELGERT
HENRY LEROY RAABE
HOWARD EVAN TOWNSEND

COLLEGE OF ENGINEERING

Mechanical Engineer

ALFRED SELLMAN BEST

Bachelor of Science

WILLIAM GEORGE BEWLEY
J. HENRY F. BITTNER
CLIFFORD ELMORE BOTELER
CHARLES WILLIAM BUTLER
FORREST COAKLEY
OSCAR BECHTOL COBLENTZ, JR.
ROBERT BEAUCHAMP DAVIS
HENRY J. EASTER
WADE HAMPTON ELGIN, JR.
ADELBERT G. ENGLAND
HAROLD WELLINGTON FINCH
HARRY FRANKLIN GARBER
NATHAN DORSEY GLOVER
HOWARD EDWARD HASSLER
MALCOLM HICKOX
WILLIAM FREDERICK KORFF
BENJAMIN W. LESUEUR
ROLAND ARTHUR LYNN
EDWARD BURNS MARKS
GEORGE WASHINGTON MORRISON

* Degrees conferred after June, 1927

HERBERT SPIESE MURRAY
WILLIAM LEROY PEVERILL
*MILLARD ARNON PINNEY
ROBERT MAURICE ROHRBAUGH
OLIVER WILSON RUNKLES
FLOYD F. SCHRADER
HERBERT ALEXANDER SMITHER
KENNETH FRANKLIN SPENCE
RAYMOND LATIMER STEVENS
WILBUR ARTHUR STREETT
WILLIAM RAMEY TRIMBLE
PAUL WALDO TRIPLETT
CHARLES SWAN WEBER
EDWARD MINOR WENNER
WILBUR MARION WHITE

COLLEGE OF HOME ECONOMICS

Bachelor of Science

HELEN GRACE BEYERLE
JOSEPHINE MUDD BLANDFORD
GERTRUDE VORHEES CHESNUT
MARY ETHEL GROVE
ELLEN JANE KEISER
JANE LAVINIA MANKIN
RUTH H. MCRAE
JESSIE FRANKLIN MUNCASTER
HELEN ALBERTA ORTON
GRACE ADELINE RIPPLE

SCHOOL OF LAW

Bachelor of Laws

LEON ABRAMSON
BERNARD B. ADLER
MORRIS ALBERT
ROBERT W. ALLNUTT, JR.
LEON APPLEFELD
JAMES G. ARCHER, JR.
GEORGE R. ASH
RIGNAL W. BALDWIN, JR.
SYLVAN BARRON
WILLIAM N. BARTELS
BENJAMIN S. BECKER
EDWARD D. BECKER
HUBERT M. BLALOCK
EARLE I. BOND
MARTIN V. B. BOSTETTER
EDWARD J. BRANNAN
JAMES R. BROWN, JR.
HENRY G. BURKE
REUBEN CAPLAN
IVAN M. CARMODY
HYMAN I. COHEN
JOHN H. CROKER
GEORGE L. DARLEY
GEORGE G. DICENZO
JOHN J. DILLON
JAMES D. C. DOWNES
SAMUEL S. EISENBERG
ARNOLD FASANO
AARON FREEMAN
ELLIS FREEMAN
JOHN P. GALVIN, JR.
LILLIAN GERSOW
HYMAN GINSBERG
HERMAN R. GINSBURG
CLARENCE M. GOLDSTEIN
BESSIE GONER
MAX GOODMAN
JUSTINUS GOULD
HARRY J. GREEN
LUCIE MARIE GUEYDAN
SYDNEY S. HANDY, JR.
CHARLES C. HARTMAN
LEONARD J. HARMATZ
SYDNEY E. HILLMAN
CHARLES H. HUDGINS
EDWARD G. HUEY
SYLVAN HURWITZ
THOMAS M. JENIFER
MILDRED JOHANNSEN
HARRY D. KAUFMAN
NELSON R. KERR
DANIEL E. KLEIN
IRVIN KLEIN
FRANK KLITZNER

Sam Lazarus
Manuel Lebowitz
Sigmund Levin
Solomon B. Levin
Walter J. Levy
Samuel G. Lipman
David A. Lipnick
Robert M. Lyon, Jr.
Robert W. MacGregor
F. Kirk Maddrix
Albert A. Malan
Harry L. Malin
David J. Markoff
Leslie E. Mihm
Raymond D. Minahan
Herbert C. Moore, Jr.
Edward E. Moriarty
Edwin J. Murphy
Israel Myers
Paul S. Ningard
William I. Norris, Jr.
Alfred J. O'Ferrall, Jr.
Meyer M. Ohen
John A. O'Shea
Solomon Pear
Francis E. Pegram, Jr.
Eben Francis Perkins
Jesse E. Phillips
Elmer E. Phipps
Eli H. Pinerman
Leonard F. Poffenberger
Granville P. Richards
Isadore Roman
Jennie Rosenberg
Jesse A. Rosenstein
Irwin Rubin
Rosa Schiffer
Carroll B. Schilpp
Kendall H. Schultz
Morton Shapiro
Charles L. Shuman
Jeanette R. Siegel
Louis Silberstein
Harry Silver
Sidney H. Sirkin
Bernard R. Smith
Frederick C. Smith, Jr.
Isadore I. Sollod
Charles L. Solomon
R. Sterling Sutton, Jr.
Isadore B. Terlitzky
Morris Tietzer
Benjamin Unger
David R. Usilton
Powell Vickers
Henry A. Weinstein
William S. Wilson, Jr .
Milton Wise
Edwin J. Wolf
Francis J. Wright

SCHOOL OF MEDICINE

Doctor of Medicine

Joseph Matthew Adzima
Albert Jack Aptaker
Joshua Harper Armacost
Claude Russell Ball
John Marion Bankhead
George Chester Basil
Hyman Belsky
Joseph George Benesunes
Julius Bialostosky
Joseph Osias Birnbaum
John Francis Cadden, Jr.
Thomas Nelson Carey
William Wiley Chase
Bernard Julius Cohen
Morris Daniel Cohen
Raphael Joseph Condry
Elijah Eugene Covington
Henry Vincent Davis
Sol Marvin Donchi
Harold William Eliason
Jacob Feldman
Kemp Ardvern Fidler
Abraham Harry Finkelstein
Meyer Henry Friedman
Wade Hampton Garner
Abraham Gellar
Charles Edward Gill
Francis Winfred Gillis

Henry Ginsberg
Bernard Glick
Isidore Goldberg
Milton Joseph Goldstein
Rowland S. Heisley
John Frank Hewitt
Dwight Moody Hoke
Ira Lee Cottrell Hummel
Jesse Raymond Johnson
Philip J. Kahn
Clyde Filmore Karns
Fayne Albert Kayser
Maurice Francis Klawans
Charles Kutner
Samuel Lassman
Sol M. Lazow
Byruth King Lenson
Julius Joseph Leyko
Goff Platt Lilly
Bernard Mattikow
Asa Wade Milhoan
Edd Alexander Misenheimer
John Edward Moran
Francis Kailer Morris
Samuel Nussbaum
Clarence William Peake
John Roberts Phillips
Herbert Eilert Reifschneider
James Glenn Saffell
John Bernard Schwedel
Anthony Joseph Sparta
Hilliard Vincent Staton
Charles Hiram Stonesifer
Helen Clymer Strayer
James Levy Swank
Wallace Ray Swartzwelder
Henry Pierce Talbot
Gordon Bennett Tayloe
Francis Bailey Teague
Thomas Payne Thompson
Louis Tollin
William Grainger Totterdale
Salvatore Anthony Tumminello
Hiram Eugene Upton
Herman Albert Voigt
Augustine Paul Von Schulz
Frederick Van Deursen Wask
Frederick Seton Waesche
Claude Thomas Whittington
Palmer Francis C. Williams
Joseph Walter Wilner
Theodore Wollak
Ralph Howard Zinn

SCHOOL OF NURSING

Graduate in Nursing

Estella Coates Baldwin
Hazel Dorothy Blackburn
Stella Pearl Bost
Eva Agnes Foust
Theressa Rhae Gerber
Rebecca Jane Hall
Jane Grace Henderson
Ethel Catharyn Holloway
Agnes Louise Holt
Virginia Esther Jackson
Emma Elizabeth Jarrell
Beatrice Lutz Krouse
Lucy Royster
Theodosia Mae Seiss
Iris Nancy Smith
Louisa Mather Wallis
Grace Elizabeth Young

SCHOOL OF PHARMACY

Graduate in Pharmacy

*Robert Nathan Abramowitz
William F. Albrecht
Samuel William Bergner
Joseph Bernstein
*Leavitt Hildebrand Binkley
William Willard Chandler
Charles Rodgers Delcher
*Elmer C. Doty
*Samuel Alvin Etzler
George Rolland Fitez

DELPHIA FRANKLIN FISHER, JR.
*WILBUR C. FOOSE
HERMAN STALEY GAVER
IRVIN J. GLEIMAN
MARIAN LOUISE HASKELL
WILMER J. HEER
*ANDREW JEROME ITZOE
SAMUEL MAURICE JACOBSON
*CHARLES FERGUSON JARVIS
*JANINA JOSEPHINE KAMINSKA
HERBERT A. KATZ
CHARLES IRVIN KELLOUGH
MERWIN ALFRED KOLMAN
PHILIP KRAMER
*LOUIS HENRY KRAUS
MORRIS LEVY
HAROLD HARRY LIPSKY
MAX ROBERT LUM
BENJAMIN MCALLISTER, JR.
CHARLES EDWARD MCGARRY
THOMAS ADRIAN MARTIN
LOUIS MASEROWITZ
LOUIS LEAR MEYERS
JOSEPH MILLETT
HERMAN NORMAN
*FRANK OLSAN
*DAVID PUGATSKY
I. S. SASLAW
DAVID ALEXANDER SKUP
FRANK LEONARD SWISKOWSKI
SAMUEL EARL WEBSTER
MEDFORD C. WOOD
MORRIS YARMACK
SIMON ZVARES

Pharmaceutical Chemist

SAMUEL W. GOLDSTEIN
RICHARD H. WATERMAN

MEDALS, PRIZES AND HONORS, 1927

Elected Members of Phi Kappa Phi, Honorary Fraternity

CHARLES CLARKE BEACH
JULIA LOUISE BEHRING
HELEN GRACE BEYERLE
GEORGE EMERSON BISHOFF
J. HENRY F. BITTNER
C. S. BRINSFIELD, JR.
RICHARD EDWIN COFFMAN
MARIAN HELEN MCGILL CONNOR
WILLIAM ALFRED FISHER
WILLIAM SASSCER HILL, JR.
ELLEN JANE KEISER
WILLIAM FREDERICK KORFF
MARY WINIFRED MCMINIMY
RUTH H. MCRAE
GLADYS MARIE MILLER
JESSIE FRANKLIN MUNCASTER
ALTON EVERETT NOCK
MARGUERITE CHILDRESS REINMUTH
HELEN GERTRUDE RYON
ENGELBERT HERRLING SCHMIDT
J. LINWOOD PARKS SHIPLEY
KENNETH FRANKLIN SPENCE
ELIZABETH JOSEPHINE TAYLOR
NORWOOD CHARLES THORNTON
WILLIAM HAROLD UPSHALL
EMIL GASTON VANDENBOSCHE
HELEN ROSE WHITE

Citizenship Medal, offered by Mr. H. C. Byrd, Class of 1908

KENNETH FRANKLIN SPENCE

Citizenship Prize, offered by Mrs. Albert F. Woods

HELEN GRACE BEYERLE

Athletic Medal, offered by the Class of 1908

M. B. STEVENS

Athletic Trophy for Women, offered by Dr. Albert F. Woods

MAXINE HEISS

American Chemical Society, National Prize Essay Contest—First Place and One Thousand Dollar Prize

CATHERINE DOUGLAS BARNSLEY

Goddard Medal, offered by Mrs. Annie K. Goddard James

WILLIAM SASSCER HILL, JR.

Sigma Phi Sigma Freshman Medal

RUTH CHARLOTTE LAWLESS

Alpha Zeta Agricultural Freshman Medal

ERNEST SAMUEL HEMMING

Dinah Berman Memorial Medal, offered by Benjamin Berman

RUDOLPH WACHTER DAUBER

Public Speaking Prizes, offered by W. D. Porter

HAZEL J. TENNEY AND RAYMOND L. STEVENS

Women's Senior Honor Society Cup

VIRGINIA SPENCE PRICE

The Diamondback Medals

MILFORD HARSH SPRECHER
AMOS BOWLUS BEACHLEY
CECIL LOY PROPST
FRANK HEWEY TERHUNE
EGBERT FULLER TINGLEY

The Reveille Medals

REESE L. SEWELL
RUTH TEFFT WILLIAMS
DANIEL COX FAHEY, JR.

The Oratorical Association of Maryland Colleges offers each year gold medals for the first and second places in an oratorical contest

Medal for second place awarded to

WILFRED ASQUITH HEARN

Alumni Medal for Excellence in Debate

GRACE E. LALEGER

National Oratorical Association award of Four Hundred Dollars to the winner of the regional contest

CHARLES CLARKE BEACH

"President's Cup," for Excellence in Debate, offered by Dr. H. J. Patterson

NEW MERCER LITERARY SOCIETY

"Governor's Drill Cup," offered by His Excellency, Honorable Albert C. Ritchie, Governor of Maryland

COMPANY A—COMMANDED BY CAPTAIN WADE H. ELGIN, JR.

President's Military Prize, offered by Dr. Albert F. Woods

CADET LIEUT. COL. LEROY W. SHERIFF

Military Medal, offered by the Class of 1899

CADET FRANCIS JOHN PORTER

Washington Chapter Alumni Military Cup

FIRST PLATOON, COMPANY A—COMMANDED BY LIEUTENANT HARRY FRANKLIN GARBER

Rifle Cup, offered by Military Department

FRESHMAN CLASS, CAPTAINED BY ALFRED FLOYD HULQUIST

University of Maryland Prize (Sword), to the best company commander

CADET CAPTAIN WADE H. ELGIN, JR.

WAR DEPARTMENT AWARDS OF COMMISSIONS AS SECOND LIEUTENANTS IN THE INFANTRY RESERVE CORPS

AMOS BOWLUS BEACHLEY
WILLIAM GEORGE BEWLEY
NORWOOD AUGUSTUS EATON
WADE HAMPTON ELGIN, JR.
HARRY FRANKLIN GARBER
JAMES GUSTAVUS GRAY, JR.
PAUL BENJAMIN GUNBY
HOWARD EDWARD HASSLER
WILLIAM SASSCER HILL, JR.
ELDRED SARELL LANIER
WILBUR MUNRO LEAF
ROBERT BURNESTON LUCKEY
EDWARD BURNS MARKS
GEORGE WASHINGTON MORRISON
KENNETH PETRIE
WILLIAM LEROY PEVERILL
CECIL LOY PROBST
EDWIN EARLY ROTHGEB
LEROY WATERS SHERIFF
KENNETH FRANKLIN SPENCE
M. B. STEVENS
WILLIAM RAMEY TRIMBLE
ROGER S. WHITEFORD
MALLERY ONTHANK WOOSTER

AWARDS OF MILITARY COMMISSIONS

LEROY WATERS SHERIFF	Lieutenant Colonel
KENNETH FRANKLIN SPENCE	Major
WILLIAM GEORGE BEWLEY	Captain
NORWOOD AUGUSTUS EATON	Captain
WADE HAMPTON ELGIN, JR.	Captain
WILLIAM SASSCER HILL, JR.	Captain
ROBERT BURNESTON LUCKEY	Captain
GEORGE WASHINGTON MORRISON	Captain
WILLIAM LEROY PEVERILL	Captain
EDWIN EARLY ROTHGEB	Captain
WILLIAM RAMEY TRIMBLE	Captain

AMOS BOWLUS BEACHLEY	First Lieutenant
HARRY FRANKLIN GARBER	First Lieutenant
JAMES GUSTAVUS GRAY, JR.	First Lieutenant
PAUL BENJAMIN GUNBY	First Lieutenant
HOWARD EDWARD HASSLER	First Lieutenant
ELDRED SARELL LANIER	First Lieutenant
WILBUR MUNRO LEAF	First Lieutenant
EDWARD BURNS MARKS	First Lieutenant
CECIL LOY PROPST	First Lieutenant
M. B. STEVENS	First Lieutenant
MALLERY ONTHANK WOOSTER	First Lieutenant
KENNETH PETRIE	Second Lieutenant
ROGER S. WHITEFORD	Second Lieutenant

HONORABLE MENTION

College of Agriculture

First Honors—ENGELBERT HERRLING SCHMIDT, RAFAEL A. CHAVARRIA, RICHARD EDWIN COFFMAN

Second Honors—C. S. BRINSFIELD, JR., ALTON EVERETT NOCK, GEORGE EMERSON BISHOFF

College of Arts and Sciences

First Honors—MARY WINFRED MCMINIMY, JOHN HOWARD BURNS, WILLIAM ALFRED FISHER, J. LINWOOD PARKS SHIPLEY, CHARLES CLARKE BEACH

Second Honors—JULIA LOUISE BEHRING, ELIZABETH JOSEPHINE TAYLOR, WILLIAM SASSCER HILL, JR., MAXINE HEISS, MARY SPENCE

College of Education

First Honors—HELEN ROSE WHITE, HELEN GERTRUDE RYON

Second Honors—GLADYS MARIE MILLER, JULIA MYRTLE HILEMAN, NAOMI C. RYON

College of Engineering

First Honors—WILLIAM FREDERICK KORFF, KENNETH FRANKLIN SPENCE, J. HENRY F. BITTNER

Second Honors—WILBUR ARTHUR STREETT, WADE HAMPTON ELGIN, JR., WILLIAM LEROY PEVERILL, HARRY FRANKLIN GARBER

College of Home Economics

First Honors—ELLEN JANE KEISER

Second Honors—HELEN GRACE BEYERLE

School of Business Administration

Delta Sigma Pi Key, honorary award for Scholarship to
G. EMIL WINROTH

School of Dentistry

University Gold Medal for Scholarship
WILLIAM PAUL HOFFMAN

Honorable Mention

JACOB N. ROSE
LOUIS ROBERT SCHILLING
BRICE MARDEN DORSEY
J. PAUL WINTRUP
FRANK HURST

School of Law

Prize of $100 for the Highest Average Grade for the Entire Course
CLARENCE MORTON GOLDSTEIN

Prize of $100 for the Most Meritorious Thesis
WILLIAM N. BARTELS

Alumni Prize of $50 for Winning Honor Case in the Practice Court
HUBERT MORSE BLALOCK

School of Medicine

University Prize Gold Medal
THOMAS NELSON CAREY

CERTIFICATES OF HONOR

CLARENCE WILLIAM PEAKE
MILTON JOSEPH GOLDSTEIN
JOHN FRANK HEWITT
CHARLES EDWARD GILL
JOSEPH OSIAS BIRNBAUM

School of Nursing

University of Maryland Nurses' Alumnae Association Scholarship to Columbia University
THERESSA RHAE GERBER

Prize of $25 for the Highest Average in Executive Ability
THERESSA RHAE GERBER

Edwin and Leander M. Zimmerman Prize for Practical Nursing
GRACE ELIZABETH YOUNG

University of Maryland Nurses' Alumnae Association Pin and Membership in the Association
ESTELLA COATES BALDWIN

Prize for Order and Neatness
AGNES LOUISE HOLT

REGIMENTAL ORGANIZATION R. O. T. C. UNIT, 1927-1928
UNIVERSITY OF MARYLAND

PAUL L. DOERR, Lieutenant Colonel, Commanding
JAMES S. DAVIDSON, JR., Captain and Regimental Adjutant

1ST BATTALION

HORACE R. HAMPTON, Major, Commanding
REESE L. SEWELL, First Lieutenant and Battalion Adjutant

COMPANY "A"	COMPANY "B"	COMPANY "C"
	Captains	
Lester P. Baird, Commanding	Ward A. Greenwood, Commanding	Wm. Walter Chapman, Jr., Commanding
	First Lieutenants	
Charles F. Pugh	J. Allan Mathews	Edward L. Troth
	Second Lieutenants	
Francis L. Carpenter Robert H. Brubaker	Buford W. Mauck H. Nelson Spottswood	Morris Ostrolenk Albin F. Knight

2ND BATTALION

DANIEL C. FAHEY, JR., Major, Commanding
JAMES P. DALE, JR., First Lieutenant and Battalion Adjutant

COMPANY "D"	COMPANY "E"	COMPANY "F"
	Captains	
John K. Daly, Commanding	John E. Ryerson, Commanding	Harold O. Thomen, Commanding
	First Lieutenants	
Frederick A. Middleton	Lewis W. Thomas Alden W. Hoage	J. Alfred Myers
	Second Lieutenants	
W. Roy Cheek Jack Vierkorn	James Arthur DeMarco	Clarence T. Blanz Richard G. Warner

CADET BAND

Band under direction of Master Sergeant Otto Siebeneichen,
The Army Band, Washington Barracks, Washington, D. C.

Captain
Carl F. Slemmer
First Lieutenant
Donald E. Shook
Drum Major
Charles G. Grey

NON-COMMISSIONED OFFICERS

1ST BATTALION

COMPANY "A"	COMPANY "B"	COMPANY "C"
	First Sergeants	
Alfred F. Weirich	Fred B. Linton	Harold L. Kreider
	Sergeants	
Frank A. Leschinsky Harry C. Ort Walter P. Plumley, Jr.	Francis J. Porter John M. Leach Thomas A. Hughes	Milton M. Price Edward A. Shepherd W. Irvine Russell

2ND BATTALION

COMPANY "D"	COMPANY "E"	COMPANY "F"
	First Sergeants	
Benjamin Dyer	Charles V. Koons	Philip Wertheimer
	Sergeants	
William L. Hopkins R. Duncan Clark J. Delmar Bock Arthur Wondrack	Edward A. Pisapia Richard J. Epple Warren B. Hughes Charles F. Whitlock	John B. Parsons Ralph C. VanAllen Arthur A. Froehlich H. Edward Wheeler

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Bafford, Joseph H., Solomons
Bonnet, R. D'Arcy, Washington, D. C.
Brown, Henry, Washington, D. C.
Chapman, W. Walter, Jr., Chestertown
Dodge, Frederick N., Havre de Grace
Fahey, Daniel C., Jr., Hyattsville
Garden, William M., Anacostia, D. C.
Gray, James G., Jr., Riverdale
Harrison, I. Burbage, Berlin
Harrison, Joseph G., Berlin
Kapp, Robert P., Ellerslie
Miller, Bernard H., Hampstead
Molesworth, Samuel R., Mt. Airy
Powell, Burwell B., Montgomery City, Mo.
Reich, Geneva E., Washington, D. C.
Ross, Marion A., Princess Anne
Sachs, Mendes H., Baltimore
Seabold, Charles W., Glyndon
Sewell, Reese L., Ridgely
Simonds, Florence M., College Park
Stanton, Harvey H., Grantsville
Tenney, Edward M., Jr., Hagerstown
Winterberg, Samuel H., Grantsville
Witter, J. Franklin, Frederick
Woodward, John R., Washington, D. C.

JUNIOR CLASS

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Cooper, William C., Salisbury
Hamilton, Arthur B., Darlington
Hershberger, Merl F., Grantsville
Hughes, George B., Jr., Ammendale
Johnston, Robert S., Schuylkill Haven, Pa.
Long, Joseph C., Ridgely
Nestler, Ralph B., Washington, D. C.
Ostrolenk, Morris, Gloversville, N. Y.
Phucas, Andrew B., Washington, D. C.
Ramsburg, Elmer K., Ellicott City
Romary, Raymond J., Ridgewood, N. J.
Smith, Ross V., Frederick
Stabler, Stanley P., Spencerville
Strasburger, Lawrence W., Baltimore
Stubbs, Donald S., Street
Teeter, William R., Lewisville, Pa.
Taylor, Theret T., Cumberland
Weiss, Theodore B., Newark, N. J.

SOPHOMORE CLASS

Beauchamp, Earl, Westover
Boyles, William A., Westernport
Brown, Robert A., Silver Spring
Burke, Ralph A., Fort Fairfield, Me.
Byrd, George C., Crisfield
Cannaday, I. Russell, Sparks
Cox, Benjamin F., Washington, D. C.
Dunnigan, Arthur P., Pylesville
Grey, Charles G., Washington, D. C.
Groshon, Lloyd E., Graceham
Hemming, Ernest S., Easton
Higgins, Wilfred E., Gaithersburg
Hoopes, Herbert R., Bel Air
Langeluttig, Ira L., Baltimore
Madigan, George F., Washington, D. C.
Marth, Paul C., Easton
Pennington, Norman E., Kennedyville
Plaza, Galo L., Glen Ridge, N. J.
Ramsburg, Morris M., Ellicott City
Randall, William A., Washington, D. C.
Remsburg, Robert K., Middletown
Ribnitzki, Fred. W., Jr., Washington, D. C.
Sanders, W. Lawrence, Havre de Grace
Schreiber, Arthur H., Chevy Chase, D. C.
Shriver, Norman J., Emmitsburg
Smallwood, W. Lawrence, Washington, D. C.
Spicknall, Norval H., Hyattsville
Van Williams, Viron, Baltimore
Wagner, Richard D., Washington, D. C.
Ward, John H., Crisfield
Zahn, Delbert, Washington, D. C.

FRESHMAN CLASS

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Baker, Kenneth W., LeGore
Bewley, John P., Berwyn
Biggs, Albert G., Mt. Lake Park
Bikle, Austin H., Smithsburg
Clark, Otway L., Ellicott City
Coddington, James W., Friendsville
Cowgill, John B., Glendale
de la Torre, Carlos, Baltimore
Dix, Jefferson, College Park
Downey, Lawrence E., Williamsport
Fisher, William C., Chevy Chase, D. C.
Fouts, Joseph K., Washington, D. C.
Frazier, Willis T., Washington, D. C.
Healy, Austin L., Baltimore
Henry, David R., Lewistown
Holter, D. Vernon, Middletown
Holter, Samuel H., Middletown
Kuhnle, John S., Westernport
Lewis, Robert L., Damascus

Linder, Paul J., Washington, D. C.
Long, Henry F., Hagerstown
Mantilla, Jorge Quito, Ecuador
Marshall, Frederick H., Washington, D. C.
Martin, Arthur F., Smithsburg
McFadden, Elihu C., Port Deposit
McPhatter, Delray B., Berwyn
Miller, G. Austin, Middletown
Naill, Wilmer H., Taneytown
Parks, John R., Sparks
Prince, David O., Ilchester
Pryor, Robert L., Lantz
Royer, Samuel T., Sabillasville
Savage, John B., Baltimore
Umbarger, Worley O., Aberdeen
Umstead, Russell A., Dawsonville
Ward, James R., Gaithersburg
Willis, Colonel C., New Market
Woods, Mark W., Berwyn

TWO-YEAR AGRICULTURAL CLASS

Bello, Luis V., Havana, Cuba
Key, Joseph H., Chaptico
Navas, Joaquin, Jr., Nicaragua, C. A.
Rudigier, Hugh, Baltimore

UNCLASSIFIED

Anderson, Howard H., Princess Anne
Newton, T. A., Kennedyville
Pettit, Bernard A., Washington, D. C.
Szetoo, Joseph K., Baltimore

COLLEGE OF ARTS AND SCIENCES

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Blanz, Clarence T., Washington, D. C.
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Brady, Katherine, Baltimore
Brubaker, Robert H., Mt. Joy, Pa.
Burleigh, William, Jr., College Park
Carpenter, Francis L., Newburg
Carrington, Raymond O., New York City
Cheek, William R., Washington, D. C.
Church, Constance, Beltsville
Collins, Milton S., Berlin
Currier, Rodney P., Washington, D. C.
DeMarco, James A., Washington, D. C.
DeRan, James J., Pylesville
Eckert, Evelyn V., Landover
Edmiston, Elizabeth, Cumberland
Elliot, Thelma A., Washington, D. C.
Essex, Alma, Lanham
Evans, Frederick H., Washington, D. C.
Faith, William L., Hancock
Fein, Jack, Elmhurst, Long Island, N. Y.
Gadd, John D., Centreville
Galligan, Joseph D., Washington, D. C.
Geller, Sam, Newark, N. J.
Granger, Albert F., Kattskill Bay, N. Y.
Greenlaw, Irving R., Ridgewood, N. J.
Hay, John O., Kensington
Hoage, Alden W., Washington, D. C.
Hodgeson, Raymond B., Silver Spring
Jones, Joseph M., Pittsville
Jones, J. Russell, Laurel
Knight, Albin F., Rockville
Laleger, Grace E., Washington, D. C.
Longenberger, Donald T., College Park
Louft, Reuben, Capitol Heights
Marlow, Louise, College Park
Matthews, Henry C., Worten
McEntee, Howard G., Ridgewood, N. J.
McGann, Burton A., Washington, D. C.
Mead, Irene C., College Park
Merrill, Charles M., Washington, D. C.
Middleton, Frederic A., Washington, D. C.
Myers, Edith K., Cumberland
Myers, John A., Washington, D. C.
Olds, Edson B., Jr., Silver Spring
Powers, Ralph W., Hyattsville
Press, William H., Washington, D. C.
Reznek, Solomon, Washington, D. C.
Ryerson, John E., Washington, D. C.
Savage, John E., Washington, D. C.
Schueler, John E., Relay
Shoemaker, Norman I., Point Pleasant, New Jersey
Shook, Donald E., Washington, D. C.
Sims, Martha T., Washington, D. C.
Slemmer, Carl F., Cumberland
Snouffer, Nelson, Jr., Buckeystown
Snouffer, Roger V., Buckeystown
Spottswood, H. Nelson, Washington, D. C.
Thompson, Nova O., Cumberland
Tippett, Howard G., Cheltenham
Troth, Edward L., Chevy Chase
Venezky, Adelyn B., Hyattsville
Waller, William K., Queenstown
Ward, H. King, Rockville
Weiland, Glenn S., Hagerstown
Wirsing, Floyd H., College Park
Wood, Emily T., Frederick
Woolman, Milly L., Hillside, N. J.
Zulick, J. Earle, Houtzdale, Pa.

JUNIOR CLASS

Aman, George, Hyattsville
Barnard, Ruth, Perryville
Billmeyer, Bruce R., Cumberland
Black, H. Ross, Jr., Hanover, Pa.
Bogorad, Daniel E., Baltimore
Boyd, Richard K., Connellsville, Pa.
Bradstreet, Fred E., New Haven, Conn.
Budlong, Herbert N., Washington, D. C.
Burnside, Edith F., College Park
Burnside, Edna M., College Park
Burroughs, George T., Upper Marlboro
Caldwell, Stuart D., Riverdale
Carrico, Louis G., Byantown
Chapman, James W., III, Chestertown
Clayton, Albert W., Brookland, D. C.
Comodo, Nicholas M., Hartford, Conn.
Corkins, Jane E., Riverdale
Cramer, Elmer R., Hagerstown
Creed, Eugene, Jr., Frederick
Croll, Mildred M., Federalsburg
Davolos, Joseph J., Wilmington, Del.
Dean, Thurston N., Washington, D. C.
Diamond, Joseph G., Long Branch, N. J.
Di Stasio, Frank, New Haven, Conn.
Doukas, James T., Towson
Dumler, John C., Baltimore
Ensor, C. Truman, New Windsor
Epstein, Herman, Centreville
Fisher, Paul L., Washington, D. C.
Foreman, Lucille, Washington, D. C.
Gause, Clemencia A., Washington, D. C.
Gentile, Charles A., Branchville
Guertler, Albert L., Schuykill Haven, Pa.
Hale, Walker A., Washington, D. C.
Halperin, David, Jersey City, N. J.
Hammack, Olyure M., Marbury
Hicks, Mary G., Tullahoma, Tenn.
Holland, John E., Jr., Princess Anne
Holzapfel, Henry, III, Hagerstown
Holzapfel, William M., Hagerstown
Hudson, James B., Jr., Stockton
Hughes, Warren B., Washington, D. C.
Insley, Richard C., Salisbury
Insley, Wade H., Jr., Salisbury
Israelson, Reuben H., Baltimore
Jacobson, Howard S., Newark, N. J.
Kahney, Norma M., Baltimore
Kaminsky, Aaron L., Newark, N. J.
Keenan, John L., Windber, Pa.
Kessler, Gordon A., Washington, D. C.
Kimmel, Charles, Newark, N. J.
Klivitzky, Max, Washington, D. C.
Korostoff, Bernard, Brooklyn, N. Y.
Kreider, Harold L., Hyattsville
Lamar, William L., Takoma Park
Laughlin, Rose Alice, Cumberland
Leschinsky, Frank A., Annapolis Junction
Linton, Fred B., Takoma Park
McMillan, Robert P., Washington, D. C.
McNeil, Walter G., Jr., Baltimore
Miller, Elizabeth, Baltimore
Myers, Alfred T., Riverdale
Norton, John H., Jr., Hagerstown
Oland, George C., Olney
Ort, Harry C., Midland
Page, William T., Jr., Chevy Chase
Philips, Alice P., College Park
Pincus, Morris H., Brooklyn, N. Y.
Pink, Sol H., Passaic, N. J.
Plumley, Walter P., Jr., Takoma Park
Pollock, Addison S., Washington, D. C.
Rivera, Arturo, Rio Piedras, Porto Rico
Robbin, Barney M., Washington, D. C.
Rosenberg, Morris M., Brooklyn, N. Y.
Rosenfeld, David A., Washington, D. C.
Rosenstein, Sidney, Jersey City, N. J.
Rubenstein, Robert, Jersey City, N. J.
Sager, Harold, Bayonne, N. J.
Sangston, Howard E., Washington, D. C.
Schnabel, William T., Baltimore
Sellman, Louise F., Beltsville
Shepherd, Edward A., Hyattsville
Simmons, John F., Cambridge
Simmons, Robert C., Takoma Park, D. C.
Smink, I. Douglas, Baltimore
Speiden, Gertrude C., Riverdale
Statman, Arthur J., Newark, N. J.
Stiffler, Bartram F., Silver Spring
Sugar, Jeanette C., Washington, D. C.
Teitelbaum, Harry A., Brooklyn, N. Y.
Temple, Margaret E., Riverdale
Tenney, Hazel J., Hagerstown
Venezky, Julian, Hyattsville
Watson, Hazel E., Hancock
Wenger, Benjamin E., Washington, D. C.
Wertheimer, Philip, Frederick
Wick, Robert M., Washington, D. C.
Winnemore, Augustine E., Chevy Chase

SOPHOMORE CLASS

Alagia, Lucia C., Elkton
Barnsley, Catherine D., Rockville
Barry, Joseph C., Washington, D. C.
Batson, John T., Chevy Chase
Beck, William O., Havre de Grace
Benner, James, Washington, D. C.
Blake, Alan F., Marion
Bowman, Harry D., Hagerstown
Boyer, Roswell R., Baltimore
Bradley, William G., Hyattsville
Bullard, Marian P., Riverdale
Bush, John M., Hampstead
Caples, Delmas, Reisterstown
Carmichael, Elizabeth L., Riverdale
Chaffinch, William P., Easton
Claflin, Margeurite A., College Park

Clark, R. Duncan, Chevy Chase
Cobey, William W., Quincy, Fla.
Collins, Richard L., Washington, D. C.
Colosimo, Vincent J., Frostburg
Conk, Robert H., Long Branch, N. J.
Cook, Albert C., Frostburg
Covington, William W., St. Michaels
Crothers, Omar D., Jr., Elkton
Crunkleton, Margaret R., Baltimore
Dallas, Robert W., Salisbury
Dean, Charles T., Ridgely
Del Pozo, Virgilio, Manati, Porto Rico
Dent, John H., Clinton
Denton, Charles A., Prince Frederick
Eckenrode, Edythe D., Reisterstown
Evans, William W., Chevy Chase
Everhart, Oscar C., Momence, Ill.
Everstine, Carl N., Cumberland
Ewald, August L., Baltimore
Fetty, Howard T., Laurel
Fishkin, Samuel W., Linden, N. J.
Fletcher, William, Takoma Park, D. C.
Fooks, S. Virginia, Preston
Frame, C. Wesley, Hyattsville
Franklin, Frank A., Orange, N. J.
Friedman, Hyman P., New York City
Gable, Raymond E., Washington, D. C.
Gahan, James B., Berwyn
Gallup, Adelaide D., Harrisburg, Pa.
Gardiner, John L., Berwyn
Goldstein, Morton A., Baltimore
Gordon, Samuel, Washington, D. C.
Gray, Harry E., Riverdale
Gruver, Evangeline L., Hyattsville
Gwynn, Rosser L., Berkley, Va.
Haines, Ernest V., Washington, D. C.
Haller, Franklin M., Brandywine
Hamer, Squire E., Westernport
Hamilton, John C., Cumberland
Harris, Walter G., Washington, D. C.
Hays, Ruth C., Takoma Park, D. C.
Heagy, Albert B., Washington, D. C.
Healy, Robert F., Glyndon
Hearne, Charles E., Jr., Salisbury
Heintz, William W., Washington, D. C.
Held, Charles W., Towson
Herrmann, Margaret G., Baltimore
Herstein, Max H., Newark, N. J.
Hetzel, Fred, Cumberland
Hoar, Robert E., Ridgewood, N. J.
Holter, Amos A., Jefferson
Hopkins, William L., Baltimore
Howard, John M., Hyattsville
Hudson, Edward E., Towson
Hughes, Thomas A., Delta, Pa.
Hughes, Richard C., Washington, D. C.
Hultquist, Alfred F., Warren, Pa.
Hutchinson, William E., Hyattsville
Insley, Philip A., Cambridge
Janetzke, Nicholas A., Baltimore
Jones, Elizabeth S., Olney
Kafer, Oscar A., Edward, N. C.
Kalmbach, Virginia M., Washington, D. C.
Kerns, Lucien H., Takoma Park
Kieffer, J. Donald, Baltimore
Kinnamon, William J., Easton
Koldewey, Adolph H., Catonsville
Koons, Melvin E., Washington, D. C.
Kress, Phyllis W., Johnstown, Pa.
Ladson, Jack A., Olney
Lambert, John R., Washington, D. C.
Lawless, Ruth C., Washington, D. C.
Lillie, Rupert B., Washington, D. C.
Linger, Irving, Washington, D. C.
Linzey, Urban T., Towson
Littman, Simon, Baltimore
Lucas, William L., Baltimore
Mace, Curtis B., Cambridge
Matheke, George A., Newark, N. J.
Mazzolini, Andrew R., Holyoke, Mass.
McCandlish, Robert J., Hancock
McDonald, John E., Alexandria, Va.
McLeod, Florence C., Alexandria, Va.
McMahon, Everett J., Fall River, Mass.
Medwedeff, Jack L., Baltimore
Meigs, Margaret, Bethesda
Mister, Fulton T., Baltimore
Nichols, Myers T., Fairmount, W. Va.
Norwood, Alice G., Bethlehem, Pa.
Nowell, William P., Washington, D. C.
Orton, Alice L., Washington, D. C.
Palmer, Marian K., Philadelphia, Pa.
Parks, Claude M., College Park
Pear, Henry R., Baltimore
Porter, Francis J., Takoma Park
Porter, Philip L., Washington, D. C.
Powers, Jerrold V., Hyattsville
Radice, Julius J., Washington, D. C.
Rasch, Richard K., Washington, D. C.
Reckson, Morris M., Brooklyn, N. Y.
Ridout, Evalyn S., Annapolis
Roberts, George H., Washington, D. C.
Robertson, John V., Ridgewood, N. J.
Robinson, Daniel R., Brooklyn, N. Y.
Roseberry, Byron L., Baltimore
Rosenbaum, Irving H., Newburgh, N. Y.
Rosenbaum, William T., New York City
Ross, Charles R., Hyattsville
Satulsky, Emanuel M., Elizabeth, N. J.
Schilling, Barbara, Cumberland
Schultz, Joseph R., Baltimore
Scoles, Peter S., Long Branch, N. J.
Scott, William H., Ocean City
Sedlacek, Joseph A., Towson
Settle, Robert T., Baltimore
Shank, William L., Mt. Sterling, Pa.
Sharf, Alec T., Hampton, Va.
Siddall, William E., Washington, D. C.
Simmons, B. Stanley, Washington, D. C.
Snyder, Gerald G., Windber, Pa.

Spector, Samuel A., Baltimore
Stephenson, Frank R., Baltimore
Stimpson, Edwin G., Washington, D. C.
Strully, Joseph G., New York City
Sullivan, Thomas R., Washington, D. C.
Sutton, Paul F., Washington, D. C.
Tawney, Chester W., Havre de Grace
Theodore, Paul S., Baltimore
Thorne, Walter A., Riverdale
Troxell, Harry S., Northampton, Pa.
Umbarger, John N., Bel Air
Valliant, Edwin S., Centreville
Voris, Lucy R., Laurel
Warcholy, Nicholas, Cumberland
Ward, Julius R., Paris
Ward, David J., Jr., Salisbury
White, Richard M., Washington, D. C.
Whiteley, Millard S., Preston
Williams, Loris E., Takoma Park, D. C.
Wilson, Harry N., Ingleside
Wilson, James S., Washington, D. C.
Wilson, William K., Chevy Chase
Wisner, Margaret, Takoma Park
Wondrack, J. Arthur, Washington, D. C.
Wright, Genevieve G., Washington, D. C.
Wylie, William C., Washington, D. C.
Ziegler, Edward S., Baltimore
Zimmerman, Fred, New York City

FRESHMAN CLASS

Adsuar, Jose, Guaynabo, Porto Rico
Ambrose, Paul M., Ligonier, Pa.
Anderson, William H., Hubbardston, Mass.
Andrews, James E., Jr., Cambridge
Ashby, Virginia C., Hyattsville
Barnes, Allen W., Salisbury
Beachy, Melvin E., Grantsville
Beall, Robert W., Bethesda
Beauchamp, Frank P., Baltimore
Beck, Samuel D., Baltimore
Becker, Bernard, Baltimore
Bennett, Charles C., College Park
Bernard, Madeline M., Washington, D. C.
Bischoff, John L., Washington, D. C.
Blackistone, Shaw, Washington, D. C.
Blenard, David C., Hagerstown
Blount, Virginia D., College Park
Blount, V. Lenore, College Park
Bowers, Arthur D., Hagerstown
Boyd, Marye D., Washington, D. C.
Branford, Charles F., Princess Anne
Briggs, Vernon M., Washington, D. C.
Bromley, George F., Chincoteague, Va.
Brouillet, George H., Holyoke, Mass.
Brunner, Elizabeth H., Brookland, D. C.
Buchanan, William K., Williamsport
Burgtorf, George E., Baltimore
Burhans, William H., Jr., Hagerstown
Butz, Harry P., Washington, D. C.
Caldara, Joseph D., Mt. Savage
Camera, Robert S., Washington, D. C.
Cannon, Harry T., Baltimore
Caputo, Ernest J., Beyer, Pa.
Carman, Perry W., Baltimore
Carrico, Rudolph A., Bryantown
Chaney, Irving D., Dunkirk
Castell, Raymond K., Takoma Park
Chaconas, Thomas J., Washington, D. C.
Chertkof, George, Baltimore
Chideckel, Morton S., Baltimore
Chinn, Abraham S., Perth Amboy, N. J.
Chiswell, Lawrence R., Washington, D. C.
Clagett, Reverdy J., Washington, D. C.
Cogswell, William K., Pikesville
Cohen, Morris M., Hyattsville
Connell, Walter A., West Grove, Pa.
de Choudens, Rafael A., Arroyo, Porto Rico
Cosimano, Joseph M., Washington, D. C.
Crothers, Charles T., Rising Sun
Dixon, Darius M., Oakland
Doukas, Louis A., Towson
Duckman, Simon, Brooklyn, N. Y.
Dunne ,Theresa F., Washington, D. C.
Dyott, J. Spencer, Easton
Eadie, Orrin C., Washington, D. C.
Eierman, Edward J., Overlea
Eisenberg, Emilie C., Lonaconing
Eisenstark, Julius, Brooklyn, N. Y.
Eliason, Anna M., New Castle, Del.
Enders, Martin L., Baltimore
Ensor, Reba V., Sparks
Epstein, Bennie F., Centreville
Etienne, Wolcott L., Berwyn
Feiser, Milo C., Hyattsville
Frankel, Oscar, East Orange, N. J.
Franklin, Charles A., Washington, D. C.
Freiria, Jose Ma J., San Juan, Porto Rico
Fuller, Emily G., Riverdale
Garreth, Ralph, Manayunk, Pa.
Gaylor, Robert, Branchville
Gelman, Sidney, Patterson, N. J.
Gilbert, Engel L. R., Frostburg
Gilbert, Irwin H., Frostburg
Gilchrest, Homer, Nyack, N. Y.
Glass, Maryvee, Clarendon, Va.
Goldstein, Albert, Baltimore
Gomborov, A. David, Baltimore
Gordon, Seymour, New York City
Gott, Winson G., Jr., Annapolis
Hammersley, William L., Washington, D. C.
Harlan, Edwin, Baltimore
Harris, Lester W., Washington, D. C.
Hasson, George B., Aikin
Hatfield, M. Rankin, Washington, D. C.
Havell, Robert B., Washington, D. C.
Heath, Arthur E., Downer's Grove, Ill.

Hemp, John A., Burkittsville
Hendlich, Milton, Ridgewood, N. J.
Hendrickson, George O., Jr., Frederick Junction
Henry, John B., Hancock
Hess, Harry C., Baltimore
Hill, William J., Altoona, Pa.
Hoffa, Inez J., Barton
Hoffman, Candler H., Hyattsville
Holland, Albert H., Easton
Holland, Charles A., Jr., Marion Station
House, Bolton M., College Park
Hunt, Josiah A., Washington, D. C.
Hunt, Walter E., Plymouth, Mass.
Jones, Elgar S., Olney
Jones, Thomas E., Cambridge
Jones, Wilbur A., Pittsville
Kanevski, Frank M., Taurage, Russia
Karp, Nathan L., Long Beach, N. Y.
Keister, John T., Washington, D. C.
Kelly, James P., Towson
Kempter, Julius E., Chambersburg, Pa.
Kinnamon, Howard F., Easton
Kirkwood, A. Elizabeth, Mt. Washington
Knapp, James W., Chevy Chase
Koons, Mary E., Washington, D. C.
Kovalcik, Nicholas G., Passaic, N. J.
Ladd, Niven F., Washington, D. C.
LaQuay, Kenneth B., Hyattsville
Layfield, William H., Salisbury
Lemer, Samuel T., Newark, N. J.
Leof, Leonard G., Elkins Park, Pa.
LeRoy, John P., Washington, D. C.
Levy, Louis S., Washington, D. C.
Leyking, William H., Washington, D. C.
Linton, Joy A., Takoma Park
Litman, Louis A., Washington, D. C.
Loy, Thomas L., Hagerstown
Lung, Clarence W., Smithsburg
Magruder, Lorraine Y., Hagerstown
Markey, D. John, Frederick
Markowitz, Louis, New York City
Martin, William B., Randallstown
May, Marian L., Hyattsville
McGinnis, William G., Binghampton, N. Y.
McIntire, Carl O., Oakland
Medley, Walter C., Mt. Rainier
Meyers, Carl J., Baltimore
Miller, Cedric V., Hagerstown
Miller, Clifford G., Saratoga, N. Y.
Miller, David S., Washington, D. C.
Mims, Elizabeth B., Washington, D. C.
Mitchell, Margaret P., Riverdale
Mitchell, Warren C., Washington, D. C.
Morris, James S., Pylesville
Morris, Kenneth L., Pylesville
Meyers, Wilbur G., Washington, D. C.
Nachlas, Bernard A., Baltimore
Needle, Harry K., Baltimore
Norwood, Hayden E., Washington, D. C.
Oberlin, Robert C., Washington, D. C.
Oglesby, Samuel C., Girdletree
O'Hare, George J., Hyattsville
Ormiston, Lawrence R., Watertown, N. Y.
Ormsby, Floyd L., Washington, D. C.
Owens, Alfred A., Washington, D. C.
Pagana, Charles C., Renovo, Pa.
Palmisano, Marie H., Baltimore
Parke, Edward L., Washington, D. C.
Parker, Henry W., Berlin
Parks, Douglas M., Cockeysville
Patchett, James R., Easton
Paugh, Dorothy A., Washington, D. C.
Rabbitt, Warren E., College Park
Ratcliffe, Joseph L., Washington, D. C.
Reedy, Robert J., Washington, D. C.
Riehl, Louis M., Lansdowne
Riggin, William E., Crisfield
Risden, Richard A., Point Pleasant, N. J.
Roberts, Richard R., White Hall
Robinson, Harold B., Silver Spring
Robinson, Murry M., Baltimore
Rosen, Bernard, Baltimore
Rude, Gilbert B., Washington, D. C.
Safford, Robert F., Darby, Pa.
Savage, John W., Rockville
Schwartz, Isaac, Long Beach, N. Y.
Seaton, Edwin C., Washington, D. C.
Schlegel, Harry F., Jr., Washington, D. C.
Shapiro, Julius A., Washington, D. C.
Shulman, Isidore, Washington, D. C.
Siegel, Benjamin, Baltimore
Silverman, Sidney, Brooklyn, N. Y.
Smith, William B., Salisbury
Spitznagle, Vernon E., Fruitland
Stevens, Edward C., Washington, D. C.
Street, Harry Gordon, Litchfield, Ohio
Sugar, Samuel J., Washington, D. C.
Sugar, Samuel J., Washington, D. C.
Sullivan, Vance R., Baltimore
Talkin, Bernard J., Baltimore
Troth, J. Robert, Chevy Chase
Truitt, May H., Salisbury
Tull, Samuel H., Marion
Unger, Arley R., Hancock
Veitch, Fletcher P., College Park
Vieweg, George L., Jr., Wheeling, W. Va
Waghelstein, Julius M., Baltimore
Walton, Elizabeth L., Salisbury
Warfel, Robert W., Havre de Grace
Webster, Eben E., Deals Island
Wells, David E., Gaithersburg
Wertz, Theodore H., Hanover, Pa.
West, Preston E., Washington, D. C.
White, William B., Towson
Whiting, Henry J., Washington, D. C.
Wilhelm, Robert E., Connellsville, Pa.
Wilk, Laudis, Whiting, Ind.
Willard, Roberta I., Berwyn
Wittig, Elizabeth B., Frostburg

Wolf, Anne E., Hyattsville
Yasner, Benjamin, Newark, N. J.
Zacharie, Charles, Marlboro, N. Y.
Zeigler, Charles E., Houtzdale, Pa.

UNCLASSIFIED

Beard, Edythe, Washington, D. C.
Brechbill, (Mrs.) Lula L., College Park
Buck, John N., Germantown, Pa.
Clay, (Mrs.) J. C., College Park
Fisher, William A., Washington, D. C.
Graybill, Mary R., College Park
Hicks, Mildred F., Tullahoma, Tenn.
Laing, A. Jane, Washington, D. C.
Lovell, Jeannette E., Brentwood
White, (Mrs.) Helen R., College Park

EXTENSION CHEMISTRY COURSE (BALTIMORE)

Evans, H. M., Baltimore
Hopkins, Edward S., Baltimore
Howes, Charles C., Baltimore
Johnson, Mildred A., Baltimore
Kenny, William R., Baltimore
Lentz, George A., Baltimore
Rockwell, Paul O., Edgewood
Tomalski, Vincent J., Baltimore
Vickroy, Leslie, Baltimore

SCHOOL OF DENTISTRY

SENIOR CLASS

Arkus, Philip, Bayonne, N. J.
Aronson, Irving J., Hillside, N. J.
Basehoar, William C., Carlisle, Pa.
Bishop, Arthur B., New Haven, Conn.
Blasini, Domingo A., Baltimore
Blumberg, Sidney H., Newark, N. J.
Bobinski, Harry, Stamford, Conn.
Bochenek, Abraham E., Elizabeth, N. J.
Bowers, Norman R., Grafton, W. Va.
Branch, Byron R., Bathurst, N. B.
Bristol, Howard, Plantsville, Conn.
Britten, Harold C., Cortland, N. Y.
Brown, Benjamin, Atlantic City, N. J.
Bucher, Lee, Baltimore
Chappelear, Theodore A., Dennison, O.
Colvin, Melvin H., Washington, D. C.
Conway, Thomas C., Holyoke, Mass.
Corey, Elmer F., Jersey City, N. J.
Costanza, Emil L., Elizabeth, N. J.
Craig, Gilbert T., Wallingford, Conn.
Crider, Frank N., Baltimore
Czajka, Edward, Danbury, Conn.
Dana, George H., Bombay, N. Y.
Deems, Paul A., Baltimore
DeFlora, Romeo J., W. Englewood, N. J.
DeVan, John K., Newark, N. J.
Donatelli, Martin L., Roseto, Pa.
Eggnatz, Meyer, Baltimore
Eigenrauch, Justus H., Jersey City, N. J.
Falk, William J., Erie, Pa.
Faucette, John W., Asheville, N. C.
Fenichel, Joseph, Newark, N. J.
Fidel, Oscar, Newark, N. J.
Frank, Samuel M., New Haven, Conn.
Gale, Ralph C., New Freedom, Pa.
Gallen, Lester C., New Brunswick, N. J.
Goldberg, Irvin B., Baltimore
Goldberg, William M., Bayonne, N. J.
Gordon, Daniel J., Harrison, N. J.
Gould, Charles K., Spartanburg, S. C.
Guerra, Francisca, Porto Rico
Hagerthy, Lawrence M., Sedgwick, Me.
Haggerty, Lewis M., Sussex, N. J.
Hofferman, Alfred M., Baltimore
Hudgins, Clement E., Trinidad, B. W. I.
Jacobs, Abraham, Newark, N. J.
Kaplan, Irvin B., Bayonne, N. J.
Kelsey, Julius J., Reading, Pa.
Kniberg, Bernard, Newark, N. J.
Knight, Benjamin M., Winchester, Va.
Kohler, Ferdinand C., Carlstadt, N. J.
Lauten, William B., Baltimore
Lavine, Benjamin, Trenton, N. J.
Lowenstein, Philip C., Elizabeth, N. J.
Machado, John S., New Bedford, Mass.
Machokas, Pius G., Baltimore
Marazas, Edward W., Minersville, Pa.
Markley, Frederick E., Staunton, Va.
McCluer, William A., Fairfield, Va .
McGrath, Vincent P., New Haven, Conn.
Mehring, Wilbur B., Taneytown
Miller, Clarence P., Tunnelton, W. Va.
Moore, Stanley G., Hagerstown
Mott, Mayo B., Davis, W. Va.
Moxley, Richard T., Wylam, Ala.
Neel, Jerrold W., Baltimore
Orange, Jerome J., Newark, N. J.
Ostrow, A. Harry, Washington, D. C.
Pennino, Joseph A., Garfield, N. J.
Rizzolo, Jeffrey B., Newark, N. J.
Rosin, Jack R., Erie, Pa.
Ruiz, Emilio M., Arecibo, P. R.
Ryan, Edwin M., Bethel, Conn.
Sachner, Benjamin, Elizabeth, N. J.
Schaedel, Carl H., Irvington, N. J.
Schusterson, Edward H., New York City
Seemann, Frank C., Perth Amboy, N. J.
Selens, Walter, Waterbury, Conn.
Shapiro, Fred, Carteret, N. J.
Silverman, David B., Norfolk, Va .
Sofferman, Irving, Bayonne, N. J.
Stagg, Horace H., Westwood, N. J.
Stock, Richard J., Gettysburg, Pa.
Teter, Harry, Elkins, W. Va.

Toye, Alfred E., Dover, N. J.
Uihlein, George A., New Haven, Conn.
Vawter, Ray A., Highland
Von Deilen, Arthur W., Morristown, N. J.
White, Charles C., Winfall, N. C.
Wright, S. Holt, Baltimore
Zerdesky, Clement A., Silver Creek, Pa.

JUNIOR YEAR CLASS

Abrams, Allen, Newark, N. J.
Allanach, Francis G., New London, Conn.
Aronson, Murray, Bayonne, N. J.
Belford, Julius E., Bayonne, N. J.
Bergen, Francis J., Waterbury, Conn.
Bernstein, Irving, New York City
Bloom, Samuel, Annapolis
Bowers, Mark E., Moorestore, Va.
Boyer, Lloyd L., Harrisburg, Pa.
Brand, Ralph A., Morgantown, W. Va.
Brauer, Benjamin B., Jersey City, N. J.
Brice, Oliver T., Annapolis
Bruskin, Lawrence T., New Brunswick, N.J.
Buttermore, Chas., Uniontown, Pa.
Capom, Joseph A., Providence, R. I.
Clendenin, George B., Wilmington, N. C.
Cranwell, Aloysius J., Union City, N. J.
Dobbs, Edward C., Springfield, Mass.
Drake, A. Dudley, Newark, N. J.
Eadie, Hugh W,, Bloomfield, N. J.
Ehrlich, Herman, Harrison, N. J.
Fancher, Morris C., Winsted, Conn.
Fogelman, David D., Patterson, N. J.
Gordon, Alan L., Baltimore
Grace, Raymond D., South Amboy, N. J.
Green, Maxwell, Atlantic City, N. J.
Greenberg, Herbert H., Annapolis
Grossman, Leon C., Elizabeth, N. J.
Harber, Morris I., Asbury Park, N. J.
Harold, Frederic S., New Haven, Conn.
Haynes, Ellery C., Middlebury, Vt.
Heeseman, Gary, Charlotte, N. C.
Hill, Harry H., Charleston, W. Va.
Hogan, Cornelius D., Mt. Holly, N. J.
Holewinski, Frank C., Baltimore
Holroyd, Trevor, Athens, W. Va.
Johnson, Howard M., Morgantown, W. Va.
Joyce, Lee A., Providence, R. I.
Kaplan, Ben, Bayonne, N. J.
Kaplan, Irving H., Newark, N. J.
Lane, Hubert W., Hillside, N. J.
Lawlor, James P., Waterbury, Conn.
Lazzell, John W., Baltimore
Levy, Montague S., Newburg, N. Y.
Lewis, James F., Parksley, Va.
Lurie, Julius J., Newark, N. J.
Mariani, Thomas E., Bayonne, N. J.
Martindale, John A., Ansted, W. Va.
Matzkin, Max N., Waterbury, Conn.
McCurdy, Clarence R., Cameron, W. Va.
McLeod, Thomas D., Upper Montclair, New Jersey
Meyer, Cord, Savannah, Ga.
Meyer, William L., Baltimore
Michniewicz, Joseph A., Bellows Falls, Vt.
Moore, Floyd P. H., Marydel
Mulrooney, Patrick E., Wilmington, Del.
Munkittrick, Alfred G., Astoria, L. I., N. Y.
Murray, Charles F., New Bedford, Mass.
Nickel, Harold M., Johnstown, Pa.
O'Connor, Frank J., Norfolk, Va.
Oertel, Carl H., Baltimore
Ohslund, Paul Q., New Haven, Conn.
O'Malley, Alfred E., Clinton, Mass.
Page, Ludolphus, G., Yanceyville, N. C.
Patterson, Lloyd W., Cumberland
Peters, Albertus B., Collingswood, N. J.
Phillips, Francis W., Providence, R. I.
Pomroy, Granville, Presque Isle, Me.
Preis, Kyrle W., Baltimore
Quillen, Frederick C., Rehoboth, Del.
Quinn, Lawrence S., New Bedford, Mass.
Richter, Theodore A., Milltown, N. J.
Roberts, Edwin J., Westernport
Robin, Milton, New York City
Robles, Cecilio, Porto Rico
Rose, Benjamin A., Meadow Bridge, West Virginia
Rosen, Sol, Newark, N. J.
Sandberg, Max, Baltimore
Savitz, Maurice J., Roxbury, Mass.
Scheidt, Charles H., Baltimore
Schwarz, William C., Elizabeth, N. J.
Seeley, Elwood W., Presque Isle, Me.
Shaffer, Samuel W., Greensboro, N. C.
Sharpley, John H., Key West, Fla.
Sherlock, John V. D., Plainfield, N. J.
Shpiner, Harry B., Newark, N. J.
Silber, Samuel E., Newark, N. J.
Slavik, Clarence R., Nutley, N. J.
Smith, James C., Madison, Va.
Spitzer, Lynden N., Mt. Jackson, Va.
Springer, Robert G., Austin, Tex.
Stang, John T., Jersey City, N. J.
Stephenson, H. L. Garysburg, N. C.
Tarr, Philip A., Bronx, N. Y.
Thomas, Nelson J., Baltimore
Tierney, Henry E., Clinton, Mass.
Tirpak, Eugene J., Glen Rock, N. J.
Trundle, William E., Port Arthur, Tex.
Tulacek, Rudolph, Baltimore
Walker, John F., Saranac Lake, N. Y.
Watkins, Sheridan N., Braddock, Pa.
Weiner, Simon L., Elizabeth, N. J.
Weisler, Herman L., Uncasville, Conn.
Weitz, Edward, Brooklyn, N. Y.
Williams, Norton T., New Haven, Conn.
Willin, John M., Oak Grove, Del.
Wolf, Sheldon L., Washington, Pa.

SOPHOMORE CLASS

Braunstein, Benjamin, Passaic, N. J.
Buday, Albert, Bridgeport, Conn.
Chanaud, Norman P., Bergenfield, N. J.
Diamond, Isadore H., Portsmouth, Va.
Gentry, Curtis, Spartanburg, S. C.
Gerstein, Irwin, Brooklyn, N. Y.
Harlacher, Anthony J., Progress, Pa.
Hulit, Elon A., Ocean Grove, N. J.
Lapow, Albert, Newark, N. J.
Leggett, Laurence L., Uhrichsville, Ohio
Maguire, John F., Atlantic City, N. J.
McAloose, Carl, McAdoo, Pa.
McNerney, Francis J., Williamsport, Pa.
Messore, Michael B., Providence, R. I.
Miller, Julius, Bayonne, N. J.
Mogilewsky, Solomon, Brooklyn, N. Y.
Nelson, Hilbert A., Arverne, N. Y.
Noll, John B., New Haven, Conn.
Pierce, Carl R., Norfolk, Va.
Reiss, Sam, Brooklyn, N. Y.
Schein, Irving, Newark, N. J.
Schwartz, Philip, Newark, N. J.
Sheinblatt, Joseph, Elizabeth, N. J.
Shupp, Isaac H., Hagerstown
Slattery, George B., Montclair, N. J.
Smith, James W., Lincolnton, N. C.
Sobel, Edward A., Hartford, Conn.
Spitzen, Percival, Elizabeth, N. J.
Wilkerson, George E., Baltimore
Wilson, James W., Mt. Airy
Wolf, John W., Carlisle, Pa.
Zamecki, Theodore M., Baltimore

FRESHMAN CLASS

Aldrey, Jorge M., Porto Rico
Barnes, Edwin C., Woodbury, N. J.
Blitzstein, Edward, Atlantic City, N. J.
Buchbinder, Milton, Bayonne, N. J.
Cline, Reginald W., Hartford, Conn.
Cohen, Jacob R., Bayonne, N. J.
Corvino, Joseph, Bayonne, N. J.
Cross, John D., Baltimore
Cummings, Owen V., Torrington, Conn.
Curry, Christian L., Union Deposit, Pa.
Dern, Carroll D., Taneytown
Dillon, Charles S., Jamaica, B. W. I.
Drumheller, Wallace G., Lansford, Pa.
Durso, James, Bayonne, N. J.
Edwards, Douglas A., Belford, N. J.
Eskin, Albert C., Newark, N. J.
Field, Reuben, Philadelphia, Pa.
Fornarotto, Samuel, Long Branch, N. J.
Friedman, Max B., Bloomfield, Conn.
Gilfoyle, Alex E., Cortland, N. Y.
Gunther, Edgar, Fort Howard
Hahn, William E., Westminster
Hamilton, Lloyd, Baltimore
Hayes, Arthur J., Newark, N. J.
Icaza, Carlos, Nicaragua, C. A.
Kania, Joseph S., New Britain, Conn.
Kearfott, Clarence W., Brunswick
Kilker, Russell P., Baltimore
Kohn, Arthur A., Bayonne, N. J.
Lankford, Allan M., Pocomoke City
Laughlin, Harry J., Chestertown
Laureska, Anthony P., Scranton, Pa.
LaVallee, Raymond E., Burlington, Vt.
Leichter, Sam F., Orange, N. J.
Levin, Jacob, Bayonne, N. J.
Lewis, Gordon A., Hagerstown
Lyons, Harry W., Newton, Mass.
Margeson, Clarence E., Clarksburg, W. Va.
Markley, Harry K., Warfordsburg, Pa.
McClung, Daryl S., Huntington, W. Va.
McGarry, Charles E., Baltimore
Miller, John W., Martinsburg, W. Va.
Minahan, Walter R., Sparrows Point
Mott, Carl B., Asheville, N. C.
Nadal, Alfredo M., Porto Rico
Nicoteri, Anthony E., Jessup, Pa.
Nirenberg, Max, New Rochelle, N. Y.
Nuttall, Ernest B., Sharptown
Pedlosky, Fred, Irvington, N. J.
Reese, Edgar B., Fairview, W. Va.
Richardson, David H., Halethorpe
Rinsland, Cyrus J., Scranton, Pa.
Rostovsky, Henry E., Baltimore
Santillo, Joseph S., Newark, N. J.
Saunders, Clarence E., Florence, S. C.
Shapiro, Emanuel, Newark, N. J.
Snyder, Elwood S., E. Orange, N. J.
Tew, Jasper J., Dunn, N. C.
Tracy, Harold J., Jersey City, N. J.
Wasilko, Julius D., Lansford, Pa.
Weitzel, Henry M., Carlisle, Pa.
White, Arthur R., Hancock
Winner, Harry J., Newark, N. J.
Wojnarowski, L. E., Ansonia, Conn.
Sukovsky, Julius M., Passaic, N. J.

PRE-DENTAL CLASS

Abramson, Isadore, Baltimore
Ainsworth, Clifford F., Jersey City, N. J.
Applegate, Charles R., South River, N. J.
Basch, Carl, Lakewood, N. J.
Beamer, Charles S., Cumberland
Berman, Nathan, Bayonne, N. J.
Beroth, Carl, Pfaftown, N. C.
Black, John A., Paterson, N. J.
Boote, Howard S., Bel Air
Boxer, Joseph, Newark, N. J.
Breslow, Isadore I., Perth Amboy, N. J.

Burstein, Sidney M., Fairfield, Conn.
Clayton, Paul R., Lansdale, Pa.
Coyle, Francis L., Cumberland
Deterding, Samuel F., Johnstown, Pa.
Devoe, Rene, Eagle Lake, Me.
Doneson, George J., Perth Amboy, N. J.
Emory, Russell J., Centreville
Farrington, Donald W., Chelmsford, Mass.
Feldblum, Joseph I., Chicora, Pa.
Fern, Arthur L., Hartford, Conn.
Francavilla, Carlo, Bristol, Conn.
Frankel, Nathan, Asbury Park, N. J.
Garrett, Raymond D., Waynesboro, Pa.
Goe, R. Thos., Baltimore
Goodkin, Ben, Passaic, N. J.
Gorsuch, Charles B., Baltimore
Graves, Raymond J., New Haven, Conn.
Grosshans, George T., Bridgeport, Conn.
Harrison, Earle F., Bridgeport, Conn.
Hergert, Carl A., Wilkes-Barre, Pa.
Hester, William A., Nutter Fort, W. Va.
Hetrick, Bruce H., Lewisberry, Pa.
Hills, Merrill C., Hartford, Conn.
Hoffer, Charles F., Carlisle, Pa.
Johnston, Hammond L., Baltimore
Jones, Ward B., Forest City, Pa.
Kaplan, Irving, Bayonne, N. J.
Katz, Herbert F., Miami, Fla.
Kershaw, Arthur J., W. Warwick, R. I.
Limerick, Robert V., McKean, Pa.
Linder, Norman, Bayonne, N. J.
Littlepage, Stanley E., Trinidad, B. W. I.
Lott, Harland W., Forest City, Pa.
Madden, James E., New Market, Va.
Maldonado, Miguel L., Porto Rico
Manuel, Joseph R., Baltimore
Miller, Herbert L., Elizabeth, N. J.
Milliken, Lyman F., Annapolis
Muir, Francis, Arlington, N. J.
Newman, Irving, Weehawken, N. J.
O'Brien, John R., Red Bank, N. J.
Persoff, Hyman, New York City
Pike, Richard I., Catonsville
Prather, Richard B., Clear Spring
Reid, Harry M., Lisbon Falls, Me.
Remy, Rudolph R., Webster, Mass.
Rosen, Benjamin L., Baltimore
Rosenbaum, Irving E., Kearny, N. J.
Rosenbloom, Reuben, Passaic, N. J.
Roth, Benjamin, Atlantic City, N. J.
Seidel, Luther P., Harrisburg, Pa.
Shultz, Albert J., Perth Amboy, N. J.
Sidle, Abraham F., Glen Burnie
Steigelman, Jay M., Barnitz, Pa.
Theodore, Alfred E., Baltimore
Thrall, Ralph B., New Britain, Conn .
Vajcovec, Joseph L., Webster, Mass.
Vederman, Minnie D., Baltimore
Waldman, Harold F., Bridgeport, Conn.
Weeks, Hemmeter E., Tarboro, N. C.
Wickes, Joseph, New Market, Va.
Wiggins, Albert W., Glenwood Ldg., N. Y.
Wolfe, Milton, New York City

COLLEGE OF EDUCATION

SENIOR CLASS

Archer, Cornelia L., Bel Air
Beall, Elizabeth M., Chevy Chase
Bishoff, Roselle, Oakland
Brumfield, Christine M., Washington, D. C.
Burdick, Alice L., Baltimore
Doerr, Paul L., Washington, D. C.
Freeny, Frances F., Delmar, Del.
Gruver, Frances I., Hyattsville
Hackett, Thomas P., Queen Anne
Harbaugh, Louise, Washington, D. C.
Hawkshaw, Emily T., Hyattsville
Henderson, Eleanor B., Cumberland
Houser, Phyllis M., Brentwood
Howard, Louise M., Dayton
Hudson, Yola V., Cumberland
Jenkins, Stanleigh E., College Park
Kelly, Josephine M., Washington, D. C.
Kemp, Grace V., Baltimore
Kirk, Jane, Colora
Knapp, Margaret E., Mt. Airy
Kuhnle, Mary E., Westernport
Leatherman, John D., Thurmont
Linkous, Fred C., Pylesville
Mauck, Buford W., Luray, Va.
McCoy, Philemon I., Beltsville
Miliner, Nona A., Stevensville
Morris, Frances F., Sykesville
Nicholas, Ellwood R., Philadelphia, Pa.
Price, Virginia S., Washington, D. C.
Pugh, Charles F., Chevy Chase
Ream, Edith C., Mt. Lake Park
Stephens, Thomas H., Washington, D. C.
Wilkinson, Perry O., Hebron
Wimer, Mildred H., Palmyra, N. J.
Wolf, Margret M., Hyattsville
Wood, May Louise, Boyd

JUNIOR CLASS

Beall, Dorothy I., Chevy Chase
Bean, Robert C., Washington, D. C.
Beggs, Harry W., Westminster
Bennett, William O., Princess Anne
Catzen, Helen, Northfork W. Va.
Corkran, Philip, Rhodesdale
Dale, James P., Whaleysville
Dickerson, Mary G., Linwood
Freeny, Eleanor P., Delmar, Del.
Garber, Elizabeth M., Washington, D. C.

Glading, Rebekah F., Lanham
Herzog, Emily C., Washington, D. C.
Hislop, Mildred A., Hyattsville
Kreider, Hazel B., Hyattsville
Lighter, M. Grace, Middletown
Maisch, Frances J., Hagerstown
Matthews, Anne R., Worton
Mayer, L. Alberta, Frostburg
McWilliam, James O., Rhodesdale
Morris, M. Naomi, Salisbury
Murray, Mary E., Mt. Savage
Myers, Warren G., Thurmont
Neely, Helen F., Brookeville
Nickell, Virginia E., Rising Sun
Parsons, John B., Washington, D. C.
Peters, B. Anita, Washington, D. C.
Pierce, Marcia E., Washington, D. C.
Price, Anna L., Queenstown
Ramsay, Preston W., Delta, Pa.
Robey, Carrie, Beltsville
Ryon, Audrey C., Waldorf
Santinie, Antoinette A., Burtonsville
Shugart, Gervis G., Streett
Siddall, Blanche, Washington, D. C.
Siddall, Emilie E., Washington, D. C.
Siehler, Adele M., Catonsville
Wallace, Marion W., Sudlersville
Walter, Blanche E., Fulton
Whiteford, Henry S., Baltimore
Wilson, C. Merrick, Ingleside

SOPHOMORE CLASS

Algire, George W., Hampstead
Ballou, Evelyn F., Washington, D. C.
Bewick, Isabel, Cumberland
Chesser, Carolyn S., Pocomoke
Derrick, Burnetta E., Takoma Park
Dunnigan, M. Regis, Washington, D. C.
Fowler, Lucille, Owings
Hartenstein, Helena J., New Freedom, Pa.
Howard, Roberta A., Hyattsville
Karr, Margaret, Bethesda
Kefauver, J. Orville, Middletown
Kolb, Dorothy I., Woodbine
Kroll, Wilhelmina D., Washington, D. C.
Lane, Marion E., Washington, D. C.
Leighton, Margaret V., Mt. Lake Park
Lowe, Erma L., Pylesville
Lowe, Ora B., Pylesville
Moser, Edward F., Thurmont
Nathanson, Rosalie, Leonardtown
Nourse, Curry, Dawsonville
Ryon, Elsie E., Waldorf
Seybolt, Grace J., Mt. Rainier
Taylor, Alice E., Perryville
Townsend, Louise S., Girdletree

FRESHMAN CLASS

Arnold, Julia C., Brentwood
Baumel, Eleanor N., Royal Oak
Beeman, Donald R., Hyattsville
Blaisdell, Dorothy J., Washington, D. C.
Bremen, John J., Aberdeen
Bull, Gladys M., Pocomoke City
Collins, Daniel R., Princess Anne
DeBoy, Dora F., Solomons
Deitz, Leah S., Hyattsville
Derr, Melvin H., Frederick
Easter, B. Harding, Rockville
Easter, Robert A., Highland
French, Doris P., Brentwood
Gall, Mabel L., Thurmont
Glynn, Maurice J., Lonaconing
Gosnell, Millard F., Laurel
Gray, Florence A., Port Tobacco
Hammack, Jane E., Washington, D. C.
Hecht, Hannah R., Havre de Grace
Hunt, Robbia, Berwyn
Kettler, Mildred A., Washington, D. C.
Lawler, Sydney T., Washington, D. C.
Leithiser, Ada L., Havre de Grace
Lighter, I. Estelle, Middletown
McGarvey, Margaret D., Washington, D. C.
Nelson, Thorman A., Cambridge
Paulsgrove, William H., Hagerstown
Payne, Stella E., Hyattsville
Rowe, Norma, Brentwood
Simmonds, Christine L., New York City
Simmons, Grace, Washington, D. C.
Smith, Virginia E., Hyattsville
Snyder, Dorothy L., Berwyn
Snyder, George G., Clear Spring
Spicknall, Florence L., Hyattsville
Wade, Margaret E., Port Tobacco
Wilson, Walter S., Highland

UNCLASSIFIED

Bromley, Luther F., Stockton
Rogers, Mary C., Riverdale

EXTENSION TEACHER-TRAINING COURSES (BALTIMORE)

(INDUSTRIAL EDUCATION)

Allen, Douglas
Anderson, Charles R.
Armstrong, J. W.
Askew, Howard
Baer, Bankard F.
Ball, Harry C.
Balsam, Frank A.
Barnes, H. W.

Beck, Leonard F.
Bell, Raymond E.
Berkle, Herman H.
Blackiston, J. T.
Bowerman, Hammond
Boylan, Edward M.
Brieger, Conrad V.
Brusack, Frank T.
Buchmeier, Paul W.
Buttner, Martha
Carroll, Jerome F.
Cesky, Frank A.
Clift, Thomas H.
Cornman, Joseph R.
Cromack, Joseph T.
Cullison, Irvin
Dashields, W. Edwin
Donelson, Raymond N.
Douglas, Hazen
Dressel, Harry W. F.
Dunstbach, N.
Elgert, John E.
Emmart, Carey F.
Ewing, Charles W.
Files, Wilmer R.
Fink, Walter
Forney, Lewis S.
Foss, Robert L.
Freeland, M. I.
Freeze, Frank L.
Galley, Joseph N.
Gardner, Harry K.
Germershausen, Henry
Gugliuzza, Joseph
Haefner, William F.
Haffner, Emanuel B.
Hall, R. Milton
Haslup, DeWilton W.
Healey, William G.
Hedrick, Melvin D.
Heylman, Stanley L.
Higgins, H. J.
Hoffacker, George
Hoover, Herbert W.
Jolly, William H.
Kahler, John P.
Kimmel, Joseph J.
Kirk, Wallace C.
Koos, Henry C.
Krausse, Harry W.
Krotee, Samuel L.
Kruse, Lillian O.
Kuehn, Peter
Lee, John M.
Letzer, Joseph H.
Longley, E. Leroy
Meyers, George A.
Miller, Harry A.
Miller, Isaac R.
Miller, Mayfort P.
Moore, Raymond L.
Moreton, Spencer
Mullen, W.
Mundey, Milton A.
Murray, John P.
Ogle, C. P.
Oheim, Henry, Jr.
Oliver, Marion
Otis, John P.
Peterson, Harold D.
Pierson, August
Pletsch, Charles M.
Raabe, Herbert L.
Randall, Roland E.
Rawlings, A. W.
Regendahl, L. P.
Rice, John E.
Rider, H. J.
Robinson, Allan
Rohde, Clarence
Ryer, Eugene H.
Sendelbach, John F.
Shaffer, George S.
Smith, Ferdinand C.
Smith, H. E.
Smith, Herbert O.
Snyder, Mattie
Spartana, A. R.
Spencer, Ethel B.
Susemihl, H. C., Jr.
Sweetland, T. R.
Sweitzer, J. A.
Sweitzer, J. A., Jr.
Thompson, Mrs. Emma S.
Townsend, Howard E.
Wagner, Walter L.
Walker, D. H.
Wann, Ernest
Watkins, Harold M.
Watkins, Robert S.
Weaver, Frank G.
Wellener, Basil S.
Wernecke, Herman
White, Gertrude C.
Wholey, Clara E.
Wiegand, Charles
Wiegman, Elgert L.
Willhide, Paul A.
Wilson, Hugh
Wolters, H. L.
Wood, John T.
Wood, William C.
Zeller, Charles F.
Ziefle, Howard E.
Zinser, Louis J.

COLORED TEACHERS

Ashe, Calvin R.
Baysmore, Mrs. Margaret E.
Branch, Milton E.
Briscoe, Joseph C.
Brown, Alexander
Bryan, Margaret L.
Buchanan, Mamie V.
Callis, James A. B.
Carr, Milton Jerome
Clark, Lloyd A.
Clarke, Antoinette
Cook, Ralph V.
Davis, Lee A.
Echols, David A.
Fessenton, Edgleaner
Fields, Carroll
Ginn, Sylvester W., Jr.
Gross, Clarence F.
Hall, Edna E.
Harris, Katherine V.
Henry, Antoinette O.
Hill, John O.
Johnson, Carrie A.
Johnson, Rosa C.
Johnson, Tazewell A.
Jones, Reuben F.
Kyler, Leighton S.
Kyler, Mary E.
Lansey, L. Agnes
Long, Oscar W.
Lowers, Adele P.
Martin, James G., Jr.
Martin, James J.
McNeil, Valeria L.
Moore, James G.
Moore, Levi V.
Moulton, Herbert C.
Randall, James
Reavis, Bessie D.
Reed, Milton B.
Sewell, Mrs. Mary N.
Sims, Charles H.
Smith, Guy M.
Smith, Jane C.
Spriggs, Edith
Stokes, Maggie
Taylor, Mary
Tittle, E. Anita
Traynham, Hezekiah
Turner, Walter T.
Tyler, Hattie A.
Washington, Howard E.
Wheatley, Mrs. Laura D.
Williams, Catherine V.
Williams, Leon W.
Woodford, Charles M.
Wright, Agnes B.
Wright, Eloise
Wright, William B.
Yancy, Sarah M.

COLLEGE OF ENGINEERING

SENIOR CLASS

Baird, Lester P., Washington, D. C.
Brady, Leslie R., Laurel
Bruehl, William O., Centreville
Cleveland, James Y., Washington, D. C.
Daly, John K., Washington, D. C.
Davidson, J. Slater, Jr., Washington, D. C.
Diener, Alfred F., Washington, D. C.
Dynes, William A., Chevy Chase
Emerson, R. Bruce, Jr., Washington, D. C.
Foehl, Edward A., Washington, D. C.
Greenwood, Arthur W., Washington, D. C.
Hampton, Horace R., Chevy Chase
Iglehart, William H., Washington, D. C.
Lang, John C., Pocomoke City
Loux, John H., Hurlock
Lowe, Delbert B., Mt. Rainier
Maloney, Herndon L., Washington, D. C.
Marseglia, Milton, Washington, D. C.
Mathews, J. Allen, Cumberland
Norris, Elick E., Washington, D. C.
Paige, Edwin C., Linthicum
Palmer, Robert L., Landover
Rader, Oris L., Washington, D. C.
Rehberger, Elmer H., Baltimore
Richard, George R., Goldsboro
Schaefer, Alfred H., Baltimore
Shelton, Charles L., Chevy Chase
Strohman, Joseph W., Washington, D. C.
Thomas, Lewis W., Washington, D. C.
Thomen, Harold O., Washington, D. C.
Warner, Richard G., Baltimore
Wells, Harry W., Chevy Chase
Wooster, Mallery O., Berwyn

JUNIOR CLASS

Atkinson, Walter S., Pocomoke
Barto, John C., Cordova
Blakeslee, Raymond D., Washington, D. C.
Bock, James D., Mt. Rainier
Bomberger, Lawrence J., Salisbury
Bowman, Julian U., Germantown
Bryan, William L., Washington, D. C.
Caldwell, Charles H., Baltimore
Cashell, Harry D., Washington, D. C.
Colburn, Raymond, Havre de Grace

Dauber, Rudolph W., Washington, D. C.
Dodd, Arthur E., Salisbury
Duvall, John C., Washington, D. C.
Dyer, Benjamin, Washington, D. C.
Elliott, William H., Oxford
Evans, Robert, Washington, D. C.
Fox, Henry C., Baltimore
Froehlich, Arthur A., Washington, D. C.
Gessford, Ross K., Washington, D. C.
Gordon, James M., Takoma Park
Graham, Thomas H., Washington, D. C.
Grieb, William E., Washington, D. C.
Hall, Jay V., Washington, D. C.
Hitch, Robert A., Washington, D. C.
Holloway, William W., Salisbury
Iager, Raymond F., Washington, D. C.
Just, Charles H., Landover
Koons, Charles V., Washington, D. C.
Leach, John M., Washington, D. C.
Loane, Emmett T., Baltimore
Mackintosh, James T., Washington, D. C.
Munroe, Benjamin, Jr., Takoma Park, D. C.
Parris, Donald S., Stemmers Run
Perham, John E., Hagerstown
Pisapia, Edward A., Washington, D. C.
Price, Milton M., Washington, D. C.
Putnam, William D., Garrett Park
Ripple, J. Franklin, Cheltenham
Russell, William I., Washington, D. C.
Schofield, William C., Washington, D. C.
Slack, John C., Washington, D. C.
Stephens, Francis D., Washington, D. C.
VanAllen, Ralph C., Washington, D. C.
Vierkorn, Jack, Washington, D. C.
Wallett, Fred D., Havre de Grace
Weirich, Alfred F., Hyattsville
Welsh, Robert R., Washington, D. C.
Wheeler, Henry E., Bel Air.
Whitlock, Charles F., Baltimore

SOPHOMORE CLASS

Ahalt, Chauncey A., Middletown
Bishop, Charles B., Washington, D. C.
Boublitz, Harry D., Baltimore
Buehm, Graef W., Washington, D. C.
Cameron, James N., North East
Cerrito, Anthony F., Baltimore
Clay, Ambrose W. W., College Park
Dean, Hugh A., Frederick
DeMarr, James D., Mt. Rainier
Dodson, Charles R., Takoma Park
Epple, Richard J., Ridgewood, N. J.
Falkenstine, Miles G., Mt. Lake Park
Fleischmann, William E., Baltimore
Gorgas, Herbert D., Baltimore
Gregory, James A., Washington, D. C.
Hanback, Bryant L., Washington, D. C.
Harper, Luther M., Cumberland
Hine, Howard H., Baltimore
Hoffman, Charles G., Eastport
Howell, Elbert J., Washington, D. C.
James, Carroll S., Frederick
Jarvis, Harry A., Berlin
Jarvis, Kendall P., Berlin
Jerardi, Joseph V., Baltimore
Kesecker, Kenneth S., Washington, D. C.
Kline, Donald L., Washington, D. C.
Kushner, Paul L., Baltimore
Lee, Thomas G., Washington, D. C.
Letvin, Samuel, Washington, D. C.
Lininger, Floyd R., Westernport
Lipphard, Foster E., Washington, D. C.
Lloyd, Madison E., Cockeysville
Lockridge, Robert W., Edmonston
Lombard, Herman, Washington, D. C.
Mitchell, Allen S., Washington, D. C.
Nevius, J. Donald, Branchville
O'Neill, John T., Washington, D. C.
Phipps, George T., Washington, D. C.
Quinn, Robert F., Washington, D. C.
Roberts, Eugene J., Washington, D. C.
Schramm, Harry S., Cumberland
Sehorn, Hale F., Washington, D. C.
Shepard, Josiah, Chevy Chase
Smith, Robert H., Washington, D. C.
Speer, Roland L., Washington, D. C.
Stacy, Harry A., Jr., Takoma Park
Talbot, Dorrance, Wortendyke, N. J.
Tansill, Roy B., Baltimore
Taylor, Norman L., Salisbury
Tinsley, Garland S., Washington, D. C.
Vogel, Leonard J., Washington, D. C.
Wallace, James N., Washington, D. C.
Walters, Francis P., Cumberland
Willmuth, Charles A., Kenilworth, D. C.
Wilson, William S., Salisbury
Winnemore, Lawrence P., Chevy Chase
Young, Melvin T., Ballston, Va.

FRESHMAN CLASS

Ackerman, Carl J., Washington, D. C.
Adams, Vincent F., Wheeling, W. Va.
Allen, Robert H., Groton, Mass.
Behymer, Wilbur L., Baltimore
Bonnet, Walter, Washington, D. C.
Brashears, Maurice L., Washington, D. C.
Buckingham, Hugh W., Washington, D. C.
Burger, John R. M., Jr., Hagerstown
Cashell, Charles F., Washington, D. C.
Cassel, Henry D., Harrisburg, Pa.
Chaney, Robert L., Washington, D. C.
Chew, William F., Jr., Pikesville
Claflin, Frederick F., College Park
Clary, John G., Washington, D. C.
Coe, Gerald B., Silver Hill

Connaughton, Owen H., Washington, D. C.
Cooper, Philip C., Salisbury
Copes, George N., Baltimore
Cowgill, Perry P., Glendale
Crentz, William L., Washington, D. C.
Dabson, Thomas P., Greensboro
Deckman, Joseph H., Bel Air
de la Torre, Mario, Baltimore
Dent, Walter P., Jr., Oakley
DiFilippo, Philip J., Baltimore
Dix, Milton E., College Park
Doran, Willis M., Randallstown
Early, Charles S., Brandywine
Ewald, Edward L., Mt. Savage
Fellows, Paul D., Washington, D. C.
Fiorucci, Louis C., Baltimore
Fisher, William A., Jr., Baltimore
Flory, Maurice P., Harman
Gifford, William R., Washington, D. C.
Gossom, Richard B., Washington, D. C.
Grohs, Conrad E., Washington, D. C.
Gross, Clifford L., White Hall
Gue, Edwin M., Germantown
Hammel, John C., Baltimore
Hargis, George R., Frederick
Hartge, William L. P., Galesville
Hoffman, Carl O., Washington, D. C.
Holloway, Francis L., Hebron
Horne, Robert C., Chevy Chase
Hughes, George F., Laurel
Jones, Harold C., Baltimore
Jones, Reginald B., Dickerson
Kay, John A., Elk Mills
Kibler, Alfred G., Greensboro
Kirby, John F., Anacostia
Klein, Alvin S., Frederick
Kohler, Charles E., Washington, D. C.
Lee, James A., Oakland
Leister, Edgar N., Hampstead
Logan, John E., Cockeysville
Maloney, Ercell L., Washington, D. C.
McClurg, Gregg H., Washington, D. C.
McDonald, Henry B., Alexandria, Va.
Milburn, Harry E., Kensington
Miller, Sidney D., Reisterstown
Mitton, John H., Washington, D. C.
Moser, LeRoy C., Boonsboro
Mowatt, Theodore A., College Park
Munson, Gerald L., Hyattsville
Orwig, Robert H., Jr., Parkton
Parran, Thornton W., Lusby
Perry, John W., Washington, D. C.
Peyton, John W., Elmhurst, L. I., N. Y.
Pitzer, John W., Cumberland
Rhind, Harold S., Washington, D. C.
Rhode, Norman I., Baltimore
Roberts, Richard E., Baltimore
Roberts, William E., Washington, D. C.
Scott, Henry M., Jr., Laurel
Seaman, Milton L., Takoma Park
Shank, Lloyd P., Middletown
Shank, Mark B., Middletown
Snyder, Robert O., Randallstown
Spence, David R., Hancock
Stevenson, John C., Ridgely
Swick, Edgar H., Capitol Heights
Taylor, George E., Annapolis
Tobias, George O., Hancock
Tudor, Clinton C., Washington, D. C.
Waesche, Douglas A., Sykesville
Wales, Ira L., Glyndon
Wenger, Frederick J., Washington, D. C.
Wildensteiner, Otto, Washington, D. C.
Wilhelm, John M., Connellsville, Pa.
Williamson, Alfred E., Laurel
Willse, Edwin M., Hoboken, N. J.
Zack, James R., Windber, Pa.

UNCLASSIFIED

Crothers, Austin L., Elkton
VanNorman, Stefan D., Washington, D. C.

EXTENSION CLASSES IN MINING

BARTON CLASS

Arnold, Domineck
Ashby, R. M.
Barnard, William S.
Beeman, Charles F.
Bradley, John
Brennan, E. R.
Broadwater, Cecil
Clark, David
Crowe, George
Duckworth, Charles J.
Evans, Luther
Evans, T. R.
Fitzgerald, Matthew
Gattens, James
Griffith, Curtis
Guy, J. P.
Harris, T. A.
Hoffa, Arthur P.
Hyde, Chester A.
Hyde, William H.
Kalbaugh, Earl C.
Kyle, Reginald
McDonald, Kinsley
McVicker, George
Moffett, Richard
Mowbray, Thomas
Myers, Robert
Powell, Dewey
Robertson, Joseph
Shuhart, Joseph
Symons, Charles E.
Thomas, Carson
Wilson, James E.

CRELLIN CLASS

Ashby, C. E.
Ashby, D. L.
Ashby, D. T.
Ashby, Stanley
Barkman, Charles
Bittinger, Milton
Bittinger, O. W.
DeWitt, T. A.
Ford, R. C.
Graham, Paul
Graham, Spencer
Hoover, William H.
Lantz, Alex
Lee, Melvin E.
Murphy, William H.
O'Haver, John
Pike, R. R.
Ream, Charles
Savage, Okey
Sincell, C. Milton
Sliger, Wilbert
Smith, Robert
Thayer, R. T.

FINZEL CLASS

Baker, Arthur
Baker, Charles
Baker, Daniel
Baker, Edward
Baker, F. W.
Baker, J. Frank
Baker, Lester
Baker, William E.
Bittner, L. F.
Bittner, Manuel
Bolden, Arthur
Burdock, Marshall
Clark, Edward
Crowe, Raymond
Crowe, Roy E.
Finzel, George
Hostetter, Carl
Hostetter, Robert
Knepp, Henry
LaRue, Cecil
Layman, Jonas
McKenzie, C. Clarence
McKenzie, Clem
McKenzie, Lewis
McKenzie, Oren
McKinzie, Jesse
McLaughlin, S.
Miller, George
Minnicks, Orville
Nickel, Florian
Snyder, Lawrence
Snyder, Lester
Wagoner, Howard
Warner, Cecil
Warner, James
Warner, John
Warner, Nelson
Warner, Simeon
Wilhelm, Kenneth
Wilhelm, Wesley
Yutzy, Melvin

FROSTBURG CLASS

Anthony, G. M.
Bahen, John
Barnett, Lee
Bean, Maurice
Brown, Charles
Carter, Frank
Casey, John L.
Close, James
Cunningham, James H.
Cullen, Daniel
Darrow, J. E.
Davis, Arch
Davis, John S.
Dennison, Allan
Dye, Herbert
Edwards, R. L.
Elrick, Joseph
Ewing, Robert
Festerman, Walter
Filer, Benjamin
Filer, Ellsworth
Fresh, Foster G.
Hartig, Daniel
Haverstick, S. Graff
Hawkins, Richard
Hitchins, Harry
Humbertson, Irvin
Humbertson, Michael
Hunt, Robert
Kamuf, Emil
Kergan, Cecil
Kilduff, Bernard
Komatz, Anton
Lapp, John
Lloyd, Henry
Machin, Thomas
McNeil, Leo
Meagher, Victor
Owens, Charles S.
Parise, Thomas
Patterson, Adam
Phillips, David
Plummer, Arch
Powers, Clarence
Rephorn, William H.
Richardson, George
Smouse, John
Snyder, Aaron
Spiker, Olin
Stark, Henry
Stevens, Eugene
Struntz, John
Sulser, Harry H.
Taylor, George
Taylor, James
Taylor, James, Jr.
Tippen, Walter
Wagus, Adolph F.
Walbert, William
Weisenborn, James A.
Wellings, George
Wolfe, Charles

KEMPTON CLASS

Antonik, Michael
Blance, John
Broll, William
Friend, Ernest
Geroski, Joseph
Gibbs, Robert
King, Albert
King, Arthur
King, E. G.
Lantz, A. L.
Lantz, C. G.
Luzier, Carl
Perchon, Stanley
Ryan, Leslie
Ryan, Richard
Strumel, Tony
Wilk, Lester

GRADUATE SCHOOL

Abrams, George J., Washington, D. C.
Balmert, Richard M., Baltimore
Barron, Edward M., Hyattsville
Beavens, E. Arthur, Washington, D. C.
Bellinger, Frederick, Edgewood
Blandford, Josephine M., College Park
Bowers, John L., Zanesville, Ohio
Bowman, John J., Washington, D. C.
Broun, Mildred L., Frederick
Carter, Cameron A., Takoma Park
Carter, Ray M., Baltimore
Clapp, Houghton G., Brentwood
Cockerille, Frank O., Washington, D. C.
Conner, M. Helen McG., Washington, D. C.
Cooke, G. B., Gloucester, Va.
Dando, Llewellyn S., Emporia, Kans.
Daskais, Morris H., Baltimore
Ditman, Lewis P., Westminster
Eaton, Norwood A., Washington, D. C.
Eaton, Orson N., Beltsville
Ehrenfield, Day, Edgewood
Ellington, George W., Lexington, Miss.
Farley, Horace B., Albion, Mich.
Feild, Frank, Baltimore
Fife, Harvey R., Buffalo, W. Va.
Fishbein, Elliot, Paterson, N. J.
Fogg, George W., Bangor, Me.
Foreman, Melvin O., Oak Harbor, Ohio
Forrest, Luke A., Baltimore
Forsythe, Gladys M., Cambridge, Ohio
Gibson, Arthur M., Baltimore
Goshorn, J. C., Baltimore
Haines, George, Hyattsville
Haller, Mark H., Washington, D. C.
Harden, Wilton C., Baltimore
Harper, Floyd H., Raleigh, N. C.
Hartman, Paul A., Temple, Pa.
Herd, Robert L., Washburn, Mo.
Horn, Millard J., Washington, D. C.
Houghland, Geoffrey V. C., College Park
Johnson, W. L., Baltimore
Kerr, William L., Ontario, Canada
Krantz, John C., Jr., Baltimore
Lagasse, Felix S., Newark, Del.
Legault, Romeo R., Argyle, Minn.
Little, Glenn A., Edgewood
Magleby, Herbert A., Washington, D. C.
Mason, Albert F., Pasadena, Calif.
McConnell, Harold S., College Park
McConnell, Pearl A., College Park
McMurtrey, James E., Jr., Washington, D. C.
McCredy, J. R., Baltimore
Miller, Edmund E., Takoma Park
Miller, James Z., Toomsboro, Ga.
Mook, Paul V., Saegerstown, Pa.
Moore, William H., Boyd
Moyer, Andrew J., Lucerne, Ind.
Nock, Alton E., Stockton
Parsons, Arthur C., Ormsby, Pa.
Patton, Gordon S., Jackson, Miss.
Peltier, Paul X., Spencer, Mass.
Poelma, Leo J., Riverdale
Pope, Merritt N., Falls Church, Va.
Prussack, Solomon, Bayonne, N. J.
Reinmuth, Otto P. H., Hyattsville
Rice, J. Earle, Frederick
Riemenschneider, Roy W., Litchfield, Ill.
Ross, Hugh, Hyattsville
Rothgeb, Russell G., College Park
Rudel, Harry W., Baltimore
Schmidt, Engelbert H., Washington, D. C.
Scruton, Herbert A., Baltimore
Sheely, Glenn F., Baltimore
Siegler, Edouard H., Takoma Park
Smith, Charles L., Covin, Ala .
Smith, Robert C., Bement, Ill.
Straughn, W. D. R., Baltimore
Streett, Wilbur A., Govans
Stuart, Leander S., Pepperell, Mass.
Stuart, William M., Washington, Va.
Supplee, William C., Washington, D. C.
Taylor, Ritchie P., Baltimore
Thornton, Norwood C., Chesapeake City
Welsh, Mark F., College Park
Welton, Wright M., Westernport
Westfall, Benton B., Buckhannon, W. Va.
Wheeler, Donald H., Baltimore
Whitehouse, William E., College Park
Whitney, F. Carl, Edgewood
Wiest, Homer E., Cressona, Pa.
Wolf, Edgar F., Baltimore
Worthington, Katherine K., Baltimore
Yoder, Roy C., College Park
Young, Agnes, Fort Collins, Colo.
Zern, Leidy D., Norristown, Pa.
Zimmerley, Howard H., Norfolk, Va.

COLLEGE OF HOME ECONOMICS

SENIOR CLASS

Bourke, Mary L., Washington, D. C.
Edmonds, Olive S., Rockville
Godbold, Josephine, Cabin John
Gunby, Frances L., Salisbury
McCurdy, Mary Jane, Takoma Park, D. C.
Williams, Ruth T., Lanham
York, Mary Stewart, College Park

JUNIOR CLASS

Appleman, Katherine R., College Park
Edmunds, Mena R., Hyattsville
Harbaugh, Phyllis, Washington, D. C.
Herzog, Aline E., Washington, D. C.
McMinimy, Margaret M., Washington, D. C.
Miller, Alverta P., Grantsville
Moore, Evelyn J., Laurel
Norton, Frances L., Hyattsville
Zilch, Helen J., Cumberland

SOPHOMORE CLASS

Balch, Bernice, Washington, D. C.
Bewley, S. Marguerite, Berwyn
Creeger, Margaret P., Thurmont
Dynes, Isabel, Chevy Chase
Freseman, Dorothea S., Baltimore
Harrison, E. Eames, Baltimore
Hoffa, Estella, Barton
Lee, Grace, Darlington
Lewis, Maude E., Washington, D. C.
Lunenburg, Lillian I., Washington, D. C.
Maxwell, Grace, Luke
Pressley, Margaret S., Elk Ridge
Price, Frances E., Darlington
Rodier, Katherine E., Washington, D. C.

FRESHMAN CLASS

Bishopp, Harriett, College Park
Clark, Margaret E., Silver Springs
Cullen, Marjorie V., Centreville
Deal, Anna J., Washington, D. C.
Gahan, Winifred, Berwyn
Jenkins, Felisa, Washington, D. C.
Lloyd, Miriam, Chevy Chase
Mead, Helen, College Park
Miles, Ruth L., Washington, D. C.
Myers, M. Evelyn, Riverdale
Oberlin, Gladys M., Silver Spring
Oberlin, Phyllis A., Silver Spring
Parry, Geraldine, Ridgewood, N. J.
Price, Nellie M., Queenstown
Robertson, Martha A., Gaithersburg
Sargent, Gwendolyn, Washington, D. C.
Schmalzer, Dorothy E., Baltimore
Spicknall, Julia M., Hyattsville
Symons, Isabel M., College Park
Temple, Martha R., Riverdale
Troxel, Mildred M., Washington, D. C.
Webster, Evelyn M., Randallstown
White, Dorothy E., Washington, D. C.

SCHOOL OF LAW

THIRD YEAR DAY CLASS

Brocato, Charles V., Baltimore
Carroll, Charles, Ellicott City
Cohen, Moses, Baltimore
Coogan, Edwin C., Norfolk, Va.
Cox, Hewlett B., Baltimore
Doub, Albert A., Cumberland
Gordon, Stewart E., Easton
Hirschmann, Joseph R., Baltimore
Hurwitz, Isidore D., Baltimore
Janofsky, Louis, Baltimore
Kenney, John H., Naugatuck, Conn.
Klein, David, Baltimore
Martin, Edwin G., Relay
McCoy, George G., Baltimore
Mylander, Elmer L., Baltimore
Neuberger, Alvin, Baltimore
Preston, Wilbur J., Baltimore
Reed, Joel H., Stafford Springs, Conn.
Renzi, William A., Baltimore
Roman, Donald P., Baltimore
Sachs, Philip H., Baltimore
Scherr, Percy, Baltimore
Schwartzman, Louis, Baltimore
Seligman, Sidney, Northfork, W. Va.
Storch, Moe L., Baltimore
Trojakowski, Chester A., Baltimore
Vogel, Charles E., Baltimore
Woodward, James G., Annapolis

THIRD YEAR EVENING CLASS

Albrecht, Clinton W., Baltimore
Altman, Samuel B., Baltimore
Ashman, Harry, Catonsville
Benjamin, James L., Salisbury
Berman, Max L., Baltimore
Bien, David W., Baltimore
Blum, Jack, Baltimore
Bollinger, William D., Glyndon
Brown, Thomas C., Baltimore
Cardin, Meyer M., Baltimore
Chambers, Robert, Baltimore
Chayt, Sidney, Baltimore
Christian, Thomas L., Green Haven
Clautice, Wilton J., Baltimore
Cobb, George, Baltimore
Cohn, Philip, Baltimore
Cooper, Benjamin B., Baltimore
Cromwell, E. Stanley, Baltimore
Danziger, Lewis, Baltimore
Davison, Irvin, Baltimore

Deponai, John M., Baltimore
Dillingham, Conway C., Baltimore
Doughney, Thomas, Baltimore
Doyle, James L., Baltimore
Dumler, John O., Baltimore
Eser, Walter J., Baltimore
Farber, Samuel S., Baltimore
Fell, Ellis M., Baltimore
Fletcher, Paul M., Cumberland
Flynn, Paul J., Baltimore
Freed, Irvin F., Baltimore
Geiselman, Austin H., Baltimore
Gerson, Harry J., Frostburg
Ginsberg, Isidore, Baltimore
Goldring, Mavis A., Baltimore
Goldstein, Maurice, Baltimore
Gorfine, Charles, Baltimore
Gross, Casper J., Baltimore
Hammel, Eugene J., Baltimore
Hannan, John P., Baltimore
Hardesty, J. Walter, Baltimore
Harris, Sol H., Baltimore
Hart, William S., Baltimore
Harvey, James E., Salisbury
Herzfeld, Bernard H., Baltimore
Hoffman, Hollen B., Baltimore
Horwitz, Milton G., Baltimore
Howard, Benjamin C., Baltimore
Ireton, John F., Baltimore
Jacobson, Bernard, Baltimore
Johnson, John T., Baltimore
Katz, Harry L., Baltimore
Kessler, John H., Vineland, N. J.
Kloze, Alexander, Baltimore
Knapp, John P., Overlea
Leithiser, William D., Havre de Grace
Levin, Abraham, Baltimore
Levin, Louis, Baltimore
Libauer, Leo E., Baltimore
Libauer, Meyer, Baltimore
Lion, S. John, Baltimore
Lochboehler, George L., Baltimore
Lyons, Charles C., Baltimore
Malloy, John J., New Orleans, La.
Margolis, Abraham L., Baltimore
Medinger, Irwin D., Baltimore
Menchine, William A., Baltimore
Meurer, Henry W., Baltimore
Meyer, Elbert J., Baltimore
Meyer, Leo J., Baltimore
Miller, Herman, Baltimore
Millhouser, Henry M., Baltimore
Moss, Albert, Baltimore
Nachman, Joseph I., Baltimore
Nachman, William, Newport News, Va.
Nordenholz, Sophie K., Baltimore
O'Brien, Edward A., Ellicott City
O'Conor, Robert J., Baltimore
Papa, Samuel, Baltimore
Pekar, Alfred L., Baltimore
Petrick, Louis E., Overlea
Pierson, Edward D., Baltimore
Posner, Nathan, Baltimore
Price, Jay S., Snow Hill
Reiblich, George K., Woodlawn
Reichelt, Arthur C., Baltimore
Renshaw, James G., Baltimore
Rosenthal, Albert N., Baltimore
Rosenthal, Joseph, Baltimore
Rubenstein, Leon A., Baltimore
Rutherford, John O., Baltimore
Sachs, Harry M., Baltimore
Samuelson, Walter, Baltimore
Sanders, John A., Baltimore
Shea, Raymond M., Naugatuck, Conn.
Sherwood, William D., Baltimore
Shriver, George M., Pikesville
Siegael, Irvin, Baltimore
Siegel, Maurice, Baltimore
Slatkin, Mortimer M., Baltimore
Sopher, Maurice, Baltimore
Sterling, Norris P., Crisfield
Stinchcomb, Charles J., Baltimore
Stone, Charles C., Macon, Ga.
Stulman, Leonard, Baltimore
Thais, J. Nuelsen, Baltimore
Thomas, A. Chase, Baltimore
Vail, James A., Baltimore
Wachter, Samuel S., Hagerstown
White, John J., Baltimore
Wilson, Bruce C., Funkstown
Wilson, Edward C., Darlington
Wyatt, Arthur R., Reisterstown
Young, Kendall A., Baltimore
Zenitz, Oscar W., Baltimore

SECOND YEAR DAY CLASS

Arenson, Ellis L., Baltimore
Bouis, George E., Mt. Washington
Budnick, Merrell I., Baltimore
Carozza, Eugene M., Baltimore
Goldstein, Joseph C., Baltimore
Hamilton, Daniel H., Pikesville
Levy, Karl M., Baltimore
Redden, Layman J., Denton
Seabolt, Martin W., Baltimore
Shipper, James A., Martinsburg, W. Va.
Swiskowski, Bernard C., Baltimore
Tompkins, Thomas B., St. Albans, W. Va.
Wagaman, John, Hagerstown

SECOND YEAR EVENING CLASS

Allers, Harry W., Baltimore
Atwood, Horace B., Baltimore
Boone, Robert G., Rogers Forge
Bornstein, Morris M., Baltimore
Brothers, Paul A., Baltimore
Cecil, Harold H., Highland
Chambers, Robert E., Baltimore
Cochran, John A., Baltimore
Cohen, J. Samuel, Baltimore
Cook, Noll S., Frostburg
Coplan, Fannye A., Baltimore
Crane, Charles K., Baltimore
Entrekin, James W., Coatesville, Pa.
Feldman, William T., Baltimore
Field, Benjamin W., Baltimore
Ginsberg, Alexander B., Baltimore
Goldberg, Benjamin, Baltimore
Griffith, Arthur E., Baltimore
Harwood, Francis C., Baltimore
Horner, James K., Baltimore
Howard, Joseph H., Waldorf
Kuethe, Marrian, Baltimore
McDorman, Francis L., Mt. Washington
McWilliams, William J., Annapolis
Mills, Daniel C., Sparrows Point
Mitchell, John H., Baltimore
Mullen, Elmer T., Baltimore
Peach, Francis T., Granite
Plummer, Hiram F., Baltimore
Poster, Tillie, Baltimore
Pratt, Henry B., Pasadena
Rheb, Charles F., Baltimore
Rogers, Grafton D., Baltimore
Rosenstock, Ezra, Westminster
Russell, Charles E., Baltimore
Samuelson, Oscar, Baltimore
Seidman, Joel I., Baltimore
Skop, Jacob, Baltimore
Slingluff, Robert L., Baltimore
Snodgrass, Ira D., Halethorpe
Sollers, James R., Lusby
Spates, George P., Baltimore
Sterling, T. K. N., Baltimore
Stevens, Paul B., Baltimore
Stone, Richard G., Baltimore
Sutton, F. Edmund, Black
Sutton, Franklin W., Baltimore
Twardowicz, Mitchel, Baltimore
Waldmann, Anthony W., Fullerton
Whiteford, William H., Baltimore
Zamanski, Bernard T., Baltimore

FIRST YEAR DAY COURSE

Boyd, J. Cookman, Baltimore
Buchner, Morgan M., Baltimore
Cable, John W., Chewsville
Chambers, Daniel B., Baltimore
Friedlander, Jack, Baltimore
Shirley, Joseph W., Reisterstown
Tarrant, Eugene U., Reedville, Va.

FIRST YEAR EVENING CLASS

Addison, T. Gibson, Baltimore
Baker, Ephraim M., Baltimore
Bass, Samuel, Baltimore
Berman, Harry H., Baltimore
Breichner, Mark A., Emmitsburg
Brewington, Ernest W., Baltimore
Brian, George T., Baltimore
Brown, Maurice R., Bladensburg
Bunting, William J., Baltimore
Cavey, Charles G., Baltimore
Conner, George A., Jefferson
Conway, John B., Baltimore
Craig, Allan J., Baltimore
Dorsey, James H., Baltimore
Egan, William C., Baltimore
Fraidin, Sadie, Baltimore
Hickman, Clara A., Baltimore
Hoot, Dorothy A., Baltimore
Jarman, Charles M., Centreville
Johnson, John D., Arlington
Johnson, S. Lloyd, Catonsville
Kemp, Alexander B., Catonsville
Kisor, Fred V., Baltimore
Kraus, George W., Baltimore
Lisansky, Nelson B., Baltimore
Lockwood, Herbert L., Catonsville
Manahan, William T., Sabillasville
Margolis, Philip, Baltimore
McAllister, Richard A., Hamilton
McDermott, Bernard M., Baltimore
McNamara, Thos. L., Baltimore
McQuaid, Wilfred T., Baltimore
Mindel, Charles, Baltimore
Monsma, Gerald, Baltimore
Olivier, Warner L., Baltimore
Rubenstein, Sidney S., Baltimore
Sachs, Leon, Baltimore
Schellhase, Donald R., Hagerstown
Schonowski, John J., Baltimore
Tippett, Richard B., Baltimore
Turnbull, John G., Towson
Urey, Harry B., Baltimore
White, Robert W., Snow Hill

UNCLASSIFIED STUDENTS

Bryan, Richard M., Baltimore
Doyle, James, Baltimore
Duckett, Oden B., Annapolis
Evans, L. Harvey, Baltimore
Everett, John W., Centreville
Forestell, F. W., Baltimore
Fribush, Abe, Baltimore
Friedman, Max, Baltimore
Goldstein, Aaron I., Baltimore
Greenberg, Rosalind, Baltimore
Gutman, Charles H., Baltimore
Hackerman, Milton M., Baltimore
Hall, Dorothy M., Baltimore
Hampson, George M., Baltimore
Hipsley, Stanley P., Baltimore
Jacobs, Benedict W., Baltimore
Kelso, Charles A., Baltimore
Knabe, Lloyd C., Baltimore
Leyko, James W., Baltimore
Mahr, Abraham, Baltimore
McMahon, Daniel A., Baltimore
Miller, Harry H., Baltimore
Mund, Alfred S., Baltimore
Nasdor, Harry L., Baltimore
Panetti, Edwin S., Baltimore
Pariser, Henry, Baltimore
Rice, Thomas W., Baltimore
Sacks, Joseph, Baltimore
Sapero, Samuel S., Baltimore
Schmidt, Edward H., Baltimore
Shafer, Lester T., Linthicum Heights
Smalkin, Harry R., Baltimore
Smith, William M., Baltimore
Stone, Amelia M., Baltimore
Swartz, James M., Baltimore
Weaver, Alva P., Baltimore

NON-MATRICULATED STUDENTS

Bortner, Rowland L., Baltimore
Milford, Odessa E., Baltimore
Pratt, Laura L., Baltimore

SCHOOL OF MEDICINE

SENIOR CLASS

Baer, Adolph, Brooklyn, N. Y.
Bailey, Hugh A., Chester, S. C.
Bedri, Marcel R., Palestine
Berger, William A., Bloomfield, N. J.
Blecher, Irving E., Brooklyn, N. Y.
Bonelli, Nicholas W., Lyndhurst, N. J.
Brager, Simon, Baltimore
Chor, Herman, Baltimore
Christian, William, Nanticoke, Pa.
Clemson, Earle P., Baltimore
Duckwall, Fred M., Berkeley Springs, W.Va.
Duncan, George A., Clarksburg, W. Va.
Friedman, Bernard, Brooklyn, N. Y.
Garred, Herbert W. D., Charleston, W. Va.
Gelber, Jacob S., Newport, R. I.
George, Jessie E., Morgantown, W. Va.
Goldberg, Victor, Baltimore
Goodman, Jerome E., Baltimore
Greer, Creed C., Parkersburg, W. Va.
Grollman, Aaron I., Baltimore
Gulck, George K., Denmark
Gundry, Lewis P., Relay
Hankin, Samuel J., Baltimore
Hayes, Paul, Baltimore
Herold, Lewis J., New York City
Johnson, Walter Brenaman, Baltimore
Jones, Henry A., Baltimore
Kaminsky, Philip, New York City
Kaufman, Israel, Brooklyn, N. Y.
Kohn, Theodore, Columbia, S. C.
Lampert, Hyman, Brooklyn, N. Y.
Lamstein, Jacob Irwin, Brooklyn, N. Y.
Laukaitis, Joseph G., Baltimore
Lerner, Morris, Brooklyn, N. Y.
Levinsky, Maurice, Bridgeport, Conn.
Levinson, Louis, Brooklyn, N. Y.
Levy, Walter H., New York City
Limbach, Earl F., Massillon, Ohio
Litsinger, Edward A., Hinton, W. Va.
Little, Luther E., Darlington
Littman, Irving I., Baltimore
Lyon, Isadore B., Hagerstown
Mace, John, Cambridge
Maddi, Vincent M., New York City
Maged, Alan J., Suffern, N. Y.
McCeney, Robert S., Laurel
McDowell, Roy H., Cherryville, N. C.
McFaul, William N., Baltimore
McGee, William B., Charleston, W. Va.
Mee, Robert A., Wakefield, N. H.
Meister, Aaron, Brooklyn, N. Y.
Merksamer, David, Brooklyn, N. Y.
Merlino, Frank A., Hammonton, N. J.
Messina, Vincent M., Baltimore
Mostwill, Ralph, Jersey City, N. J.
Piacentine, Pasquale A., New York City
Pileggi, Peter, Newark, N. J.
Rascoff, Henry, Brooklyn, N. Y.
Rich, Benjamin S., Catonsville
Roetling, Carl P., Relay
Rosen, Marks J., Brooklyn, N. Y.
Rubenstein, Hyman S., Baltimore
Rutter, Joseph H., Baltimore
Saffron, Morris H., Passaic, N. J.

Sardo, Samuel R., Johnstown, Pa.
Shaw, Cecil C., Whatley, Ala.
Silver, Abraham A., New Haven, Conn.
Singer, Jack J., Baltimore
Smoot, Aubrey C., Fullerton
Smoot, Merrill C., Denton
Stacy, Theodore E., Baltimore
Tannenbaum, Morris, Bronx, N. Y.
Taylor, Charles V., Baltimore
Temple, Levi W., Lakeview, S. C.
Tanner, David, Baltimore
Tkach, Nathan H., Brooklyn, N. Y.
Varney, William H., Baltimore
Vernaglia, Anthony P., New York City
Vogel, S. Zachary, Brooklyn, N. Y.
Warner, Carroll G., Baltimore
Weintraub, Fred S., Pittsburgh, Pa.
Weisenfeld, Nathan, Hartford, Conn.
Weiss, Aaron, Brooklyn, N. Y.
Wells, Samuel R., New Martinsville, W. Va.
Wilkerson, Albert R., Baltimore
Wolf, Frederick S., Baltimore
Wurzel, Milton, Newark, N. J.
Yarbrough, Oscar D., Auburn, Ala.
Zimmerman, Frederich T., Philadelphia, Pa.

JUNIOR CLASS

Abramowitz, Max, Brooklyn, N. Y.
Ackerman, Jacob H., Brooklyn, N. Y.
Alessi, Silvio A., Baltimore
Amos, Hugh, Cambridge, Ohio
Anderson, Walter A., Baltimore
Bardfeld, Benjamin, Vineland, N. J.
Barland, Samuel, Bronx, N. Y.
Birely, Morris F., Thurmont
Bongiorno, Henry D., Passaic, N. J.
Botsch, Bernard, Alliance, Ohio
Bowen, James P., Belton, S. C.
Brauer, Selig L., Jersey City, N. J.
Calas, Andres E., Baltimore
Chambers, Earl L., Baltimore
Chapman, William H., Baltimore
Ciccone, Arnold W., Providence, R. I.
Clark, Francis A., Charleston, W. Va.
Cohen, Herman, Trenton, N. J.
Cohen, Paul, Baltimore
Conn, Jacob H., Baltimore
Corsello, Joseph N., Brooklyn, N. Y.
Dailey, William P., Steelton, Pa.
Daniels, Willard F., Elkins, W. Va.
De Barbieri, Fred L., Galeton, Pa.
Draper, William B., Baltimore
Farbman, Meyer D., New York City
Fargo, William R., Baltimore
Fatt, Henry C., Hoboken, N. J.
Feingold, Charles R., Brooklyn, N. Y.
Feit, Emanuel, New York City
Fifer, Jesse S., Wyoming, Del.
Garber, Jacob S., Brooklyn, N. Y.
Givner, David, Baltimore
Gouldman, Edwin F., Colonial Beach, Va.
Guiglia, Sascha F., Baltimore
Haney, John J., Trenton, N. J.
Heck, Leroy S., Baltimore
Helms, Samuel T., Baltimore
Holroyd, Frank J., Princeton, W. Va.
Horowitz, Morris, Springfield, Mass.
Husted, Samuel H., Newport, N. J.
Isern, Rafael A., Vilar, Porto Rico
Jackson, Murray E., New York City
Jacobs, Abraham, Brooklyn, N. Y.
Kelly, Clyde E., Scottdale, Pa.
Kendall, Benjamin H., Shelby, N. C.
Knight, Walter P., Throop, Pa.
Levi, Ernest, Baltimore
Lynn, Irving, Jersey City, N. J.
Lynn, John G., Cumberland
Matsumura, Junichi, Hawaii
McAndrew, Joseph T., Clarksburg, W. Va.
McGowan, Joseph F., McKees Rocks, Pa.
Meranski, Israel P., Hartford, Conn.
Morgan, Isaac J., Pittsburgh, Pa.
Moser, Charles Y., Terra Alta, W. Va.
Murphy, John E., Olyphant, Pa.
Neistadt, Isidore I., Baltimore
Neuman, Findley F., Cleveland Heights, O.
Neuman, Saul C., Hartford, Conn.
Nickman, Emanuel H., Atlantic City, N. J.
O'Dea, John F., Elmira, N. Y.
Overton, Lewis M., Rocky Mount, N. C.
Penchansky, Samuel J., Bayonne, N. J.
Porterfield, Maurice C., Baltimore
Prager, Benjamin, Brooklyn, N. Y.
Reeder, Paul A., Buckhannon, W. Va.
Reilly, John V., Newark, N. J.
Roberts, Eldred, Westernport
Safer, Jake V., Jacksonville, Fla.
Safford, Henry T., El Paso, Tex.
Schreiber, Morris, Coney Island, N. Y.
Schwartzbach, Saul, Washington, D. C.
Seibel, Jack, Brooklyn, N. Y.
Sekerak, Raymond A., Bridgeport, Conn.
Serra, Laurence M., Brooklyn
Sikorsky, Albert E., Baltimore
Silver, Mabel I., Baltimore
Soifer, Albert A., Baltimore
Solomon, Milton, Brooklyn, N. Y.
Speicher, Wilbur G., Accident
Spencer, Ernest, Bel Alton
Spurrier, Oliver W., Baltimore
Staton, Leon R., Hendersonville, N. C.
Stevenson, Charles C., Salt Lake, Utah
Sullivan, William J., Providence, R. I.
Ullrich, Henry Franz, Baltimore
Vann, Homer K., Sebring, Fla.

Vestal, Tom F., Winston-Salem, N. C.
Volenick, Lee J., Brooklyn, N. Y.
Wallack, Charles A., Newark, N. J.
Ward, Hugh W., Owings
Waters, Zack J., Moyock, N. C.
Yeager, George H., Cumberland
Yudkoff, William, Bayonne, N. J.

SOPHOMORE CLASS

Aronofsky, Milton R., Hartford, Conn.
Ashman, Harry, Baltimore
Baumgardner, George M., Taneytown
Baylus, Meyer M., Baltimore
Belinkin, William, New York City
Benfer, Kenneth L., Baltimore
Benson, Alvan H., Baltimore
Berkowitz, Rudolph, Bronx, N. Y.
Blum, Joseph S., Baltimore
Borow, Henry, Fargo, N. D.
Burns, John H., Sparrows Point
Cannon, David C., Baltimore
Chenitz, William, Newark, N. J.
Cohen, Archie R., Baltimore
Cohen, Irvin J., Baltimore
Cohen, Max H., Baltimore
Coppola, Matthew J., New York City
Durrett, Clay E., Cumberland
Dyar, Edna G., Washington, D. C.
Edmonds, Henry J., Kilmarnock, Va.
Farinacci, Charles J., Cleveland, Ohio
Faw, Wylie M., Cumberland
Feman, Jacob G., Brooklyn, N. Y.
Fiocco, Vincent J., Brooklyn, N. Y.
Fisher, Samuel, Paterson, N. J.
Flescher, Julius, Baltimore
Garey, James Lyman, State College, Pa.
Garfinkel, Abr., New York City
Gerner, Harry E., Jersey City, N. J.
Gersten, Paul F., Brooklyn, N. Y.
Ginsberg, Leon, Bronx, N. Y.
Goldman, Lester M., Newark, N. J.
Goldstein, Jacob E., New York City
Goodman, Julius H., Baltimore
Hildenbrand, Emil J., E. New Market
Hornbaker, John H., Hagerstown
Hudson, Rollin C., Towson
Johnson, Marius P., Hartford, Conn.
Kilgus, John F., Williamsport, Pa.
Kirschner, Abe E., New York City
Kleinman, Abraham M., Brooklyn, N. Y.
Kovarsky, Albert E., Freehold, N. J.
Kraemer, Samuel H., Jersey City, N. J.
Kremen, Abraham, Baltimore
Kuhn, Esther F., Baltimore
Levin, Morton L., Baltimore
Levy, Solomon, Palestine
Lewandoski, Henry C., Baltimore
Lewis, Frank R., Whaleysville
Magovern, Thomas F., South Orange, N. J.
Mansdorfer, G. Bowers, Baltimore
Miller, Benjamin H., Port Deposit
Miller, Isaac, Bergen, N. J.
Miller, James A., Reisterstown
Montilla, Victor J., Porto Rico
Mortimer, Egbert L., Baltimore
Needle, Nathan E., Baltimore
Oppenheim, Joseph H., Brooklyn, N. Y.
Perlman, Robert, Brooklyn, N. Y.
Post, Charles G., New Brighton, N. Y.
Powell, Joseph L., Scranton, Pa.
Reid, Francis F., Baltimore
Rineberg, Irving E., New Brunswick, N. J.
Romano, Nicholas M., Roseto, Pa.
Rosenthal, Abner H., Brooklyn, N. Y.
Rozum, John C., Sloatsburg, N. Y.
Shill, Benjamin, Newark, N. J.
Shulman, Louis R., Baltimore
Smith, Joseph J., Bridgeport, Conn.
Snoops, George J., Baltimore
Snyder, Nathan, Baltimore
Soltroff, Jack G., Philadelphia, Pa.
Sperling, Nathaniel M., Brooklyn, N. Y.
Straka, Robert P., College Park
Weinstein, Jack, Brooklyn, N. Y.
Werner, Aaron S., Brooklyn, N. Y.
Woolley, Alice S., Yankton, S. D.
Young, Ralph F., Hagerstown
Zeiger, Samuel, Brooklyn, N. Y.

FRESHMAN CLASS

Adalman, Philip, Baltimore
Adams, Pius E., Baltimore
Allen, Howard S., Stewartstown, Pa.
Andrew, David H., Baltimore
Baldwin, Kenneth M., New Haven, Conn.
Bamberger, Beatrice, Baltimore
Barr, William C., Washington, D. C.
Baumgartner, E. I., Oakland
Berman, Henry I., Baltimore
Bernstein, Joseph, Baltimore
Bradley, John E., Ellicott City
Brayshaw, Thomas H., Glenburnie
Brice, Arthur T., Betterton
Brill, Bernard, Brooklyn, N. Y.
Brill, John Leonard, Philadelphia, Pa.
Clouse, Paul R., Confluence, Pa.
Contract, Eli, Baltimore
Cudlipp, Irene M., Baltimore
Davis, Melvin B., Baltimore
Dawson, William M., Shelter Island, N. Y.
Donohue, Bernard W., Mt. Washington
Drenga, Joseph F., Baltimore

Eckstein, Harry, Brooklyn, N.Y.
Edel, John W., Stoneleigh
Edgerton, Glenn S., Kenly, N. C.
Empie, John C., Baltimore
Ernest, Roy C., Coshocton, Ohio
Fahey, Edward V., Pittsburgh, Pa.
Feldman, Samuel, Baltimore
Feuer, Arthur, New York City
Fitch, Wilmer P., New York City
Foster, Ruth, Baltimore
Fox, George D., Annapolis
Friedman, Joseph, Brooklyn, N. Y.
Fuhrman, William N., Baltimore
Funk, Zanerian E., Hagerstown
Ginewsky, Solomon I., Hartford, Conn.
Glantz, Albert L., Baltimore
Grossman, Isadore, Baltimore
Grove, Donald B., Cumberland
Gundry, Rachel K., Baltimore
Halper, Arthur M., New York City
Haskell, Marian L., Lutherville
Headley, Albert E., Cambridge, Ohio
Helfrich, Raymond F., Baltimore
Hoffman, Reuben, Baltimore
Hollander, Mark B., Baltimore
Hornbrook, Kent M., New Martinsville, W.V.
Jacobs, Herman, Brooklyn, N. Y.
Jacobson, Samuel M., Baltimore
Jaklitsch, Frank H., Richmond Hill, N. Y.
Jensen, Carl D., Seattle, Wash.
Jeppi, Joseph V., Baltimore
Jett, Page C., Baltimore
Jones, Arthur F., Cumberland
Justice, James T., Kernersville, N. C.
Kahn, Herbert A., Baltimore
Karger, Abraham, New York City
Kaufman, Max, Baltimore
Keefe, Walter J., Waterbury, Conn.
Kermisch, Albert, Baltimore
Klimes, Louis F., Baltimore
Kohn, Walter, Baltimore
Kreiger, Jerome L., Baltimore
Kulacki, Leo L., Baltimore
Lachman, Harry, Baltimore
Lang, Abraham, New York City
Langeluttig, Harry V., Baltimore
Lerner, Philip F., Baltimore
Leshine, Sidney S., New Haven, Conn.
Levine, David R., Brooklyn, N. Y.
Lieberman, Samuel, Bronx, N. Y.
Lubin, Paul, Baltimore
Mankovich, Desiderius, Punxsutawney, Pa.
Martin, Thomas A., Asbestos
Marx, Ernest B., Baltimore
Masterson, John F., Jersey City, N. J.
Mayolo, Larry P., Newburg, W. Va.
McAllister, Benj., Cambridge
McGlynn, Patrick J., Philadelphia, Pa.
McHale, George F., Pittston, Pa.
Meyer, Leo M., Brooklyn, N. Y.
Miller, Henry F., Baltimore
Moore, William P., Hammondsville, Ohio
Moyers, Waldo B., Mathias, W. Va.
Murphy, Richard L., Manchester, N. H.
Meyers, George T., Cumberland
Newnam, Alpheus C., Bellevue
Nocera, Francisco P., Porto Rico
Palitz, Leo S., New York City
Perdew, Paul R., Cumberland
Peters, William H., Baltimore
Pfaff, Joseph J., Baltimore
Purinton, William A., Bangor, Me.
Rehmeyer, Walter O., Shrewsbury, Pa.
Rodriguez, Manuel, Porto Rico
Rohm, Jack Zeth, Carnegie, Pa.
Rohm, Robert F., Carnegie, Pa .
Rosenberg, Benjamin, Brooklyn, N. Y.
Ryan, John P., Baltimore
Schimunek, Emmanuel A., Baltimore
Seabold, William M., Catonsville
Sechrist, Gurrien P., Dallastown, Pa.
Seidman, Herman H., New York City
Shamahan, Daniel S., Halethorpe
Shelley, Harry S., Baltimore
Shenberger, Donald C., Dallastown, Pa.
Shochat, Albert J., New York City
Siwinski, Arthur G., Baltimore
Sklar, Isidor A., Baltimore
Slate, Marvin L., High Point, N. C.
Smith, Solomon, Baltimore
Sowers, Lowell M., Clearspring
Spence, Thomas T., Monessen, Pa.
Sprecher, Milford H., Fairplay
Stephens, Herbert R., Westminster
Sterling, Susanne, Crisfield
Stevens, Russell A., Dunmore, Pa.
Svitak, Adolph J., Baltimore
Taylor, Robert B., Crafton, Pa.
Todd, Howard D., Baltimore
Van Ormer, William A., Schellsburg, Pa.
Warren, Edward W., Ithaca, N. Y.
Wigderson, Henry, New York City
Wirts, Carl A., Pittsburgh, Pa.
Wojcik, William J., Raspeburg
Woodward, Lewis K., Westminster
Zupnik, Howard L., New Freedom

SCHOOL OF NURSING

POST GRADUATES

Hunt, Alice E., Topeka, Kans.
Peske, Ella, Wheat Ridge, Colo.

GRADUATES

Baldwin, Estella C., Elkridge
Blackburn, Hazel D., Port Deposit
Bost, Stella P., Newton, N. C.
Foust, Eva A., Dundalk
Gerber, Theressa R., Hagerstown
Hall, Rebecca J., Northeast
Henderson, Jane G., Kansas City, Mo.
Holloway, Ethel C., Hebron
Holt, Agnes L., Seaford, Del.
Jackson, Virginia E., Newark
Jarrell, Emma E., Baltimore
Krouse, Beatrice L., Frostburg
Mundy, Fannie M., Abbeville, S. C.
Royster, Lucy, Henderson, N. C.
Seiss, Theodosia M., Rocky Ridge
Smith, Iris N., White Stone, Va.
Wallis, Louisa M., Northeast
Young, Grace E., Taneytown

SENIOR CLASS

Berry, Elizabeth A., Martinsburg, W. Va.
Currens, Margaret E., Sykesville
Duggar, Hilda L., Boswell, Pa.
Hall, Edith E., Northeast
Hamrick, Irene E., Hickory, N. C.
Hastings, Martha A., Delmar, Del.
Hoffman, Anne E., Woodsboro
Hoffman, Celeste E., Baltimore
Hough, Goldie I., Boyds
Huddleston, Thelma L., Raleigh, N. C.
Kelly, Mary K., Ocean City
Leishear, Frances M., Brookeville
Magruder, Martha A., Baltimore
Marcus, Mildred M.. Williamsport, Pa.
Pearce, Marie C., National
Pennewell, Elizabeth S., Berlin
Priester, Elizabeth A., Catonsville
Riffle, Margaret M., Emmitsburg
Roth, Katherine L., Morgantown, W. Va.
Slacum, Emily R., Delmar, Del.
Smith, Vada B., Baltimore
Wagner, Grace B., Table Rock, Pa.
Winship, Emma A., Baltimore
Work, Elizabeth R., Dallastown, Pa.

INTERMEDIATE CLASS

Bradburn, Eva M., Spencer, N. C.
Conner, Gertrude N., Berlin
Coulter, Mildred M., Newton, N. C.
Dick, Grace E., Lonaconing
Dill, Naomi M., Severna Park
Emmert, Grace M., Washington, D. C.
Esterly, Edna A., Frederick
Fazenbaker, Freda G., Westernport
Fite, Lida J., Dauphin, Pa.
Fox, Maggie M., Sellman
Gillies, Christina B., Jamaica, B. W. I.
Goldsborough, Eleanor E., Romney, W. Va.
Goodman, Hattie G., Princess Anne
Haddox, Evelyn C., Berkeley Springs, W.Va.
Hardy, Jessie D., Gulfport, Miss
Hastings, Daisymae, Hurlock
McLaughlin, Gertrude C., Jacksonburg,W.V.
Miller, Corinne B., Lonaconing
Moore, Vivian M., Frederick
Morgan, Edith E., Massies Mill, Va.
Neikirk, Milbrey C., Boonsboro
Nelson, Margaret, Havre de Grace
Ocheltree, Martha M., Weston, W. Va.
Pifer, Martha R., Strasburg, Va.
Pusey, Hannah L., Ocean City
Rankin, Mildred N., Madison, N. C.
Ross, Verna N., Barton
Roth, Emma E., Hamilton
Shaw, Isabel S., Taneytown
Shipley, Mildred M., Sykesville
Swartz, Vesta L., Strasburg, Va.
Thawley, Grace L., Hobbs
Valaco, Dena V., Baltimore
Vickers, Louise D., Federalsburg
Victor, Alberta L., Baltimore
Walsh, Helen B., Rowlesburg, W. Va.
Wetzel, LaRue K., Union Mills
Willis, Hilda D., Bridgeton, N. C.
Wright, Kathryn E., Camp Holabird
Young, Ruth A., Taneytown
Zapf, Evelyn, Baltimore.

JUNIOR CLASS

Bell, Grace, Luke
Bulman, Mabel H., Wachapreague, Va.
Dutterer, Grace N., Westminster
Hohman, Hilda P., Spencer, N. C.
Hutchinson, Lera M., White Stone, Va.
Sheppard, Myrtle L., Bel Air
Tarun, Bertha A., Baltimore

PROBATIONERS

Adkins, Gladys B., Pittsville
Ayersman, Ethel E., Rowlesburg, W. Va.
Baker, Dora J., Cumberland
Ballon, Alyce C., Beckley, W. Va.
Bradley, Alma M., Federalsburg
Brittain, Bernice E., Federalsburg
Conner, Marie E., Baltimore
Davis, Oscie L., Elizabeth City, N. C.
Frothingham, Ruth C., Baltimore
Insley, Amanda E., Cropo
Laigneil, Eva E., Federalsburg
Lefler, Annie A., Albemarle, N. C.
McCullough, Evelyn M., Baltimore
Powers, Fannie H., Moorefield, W. Va.
Reed, Mildred, Cambridge
Ryan, Mary L., Baltimore
Tilghman, Maude E., Parsonsburg
Trice, Elizabeth S., Federalsburg
Ward, Ruth C., Forest Hill
Wetzel, Catherine H., Union Mills
Young, Mary V., Cumberland

SCHOOL OF PHARMACY

CANDIDATES FOR B. S. DEGREE

Andrews, Marvin J., Baltimore
Bauer, John C., Baltimore
Goldstein, Samuel W., Baltimore
Millett, Jos., Pen-Mar.
Racusin, Nathan, Baltimore
Schulman, Emanuel V., Baltimore
Slama, Frank J., Baltimore
Storch, Arthur, Baltimore

SENIOR CLASS

Barry, Wilbur F., Baltimore
Belford, Joseph, Baltimore
Bernstein, Joseph, Baltimore
Blumson, Samuel S., Baltimore
Bretzfelder, Benj., Washington, D. C.
Budacz, Frank M., Baltimore
Cannaliato, Vincent J., Baltimore
Christ, Frank P., Hughesville
Cohan, Nathaniel T., Trenton, N. J.
Cohen, Irving I., Baltimore
Cohen, Isidore, Baltimore
Crecca, Anthony D., Newark, N. J.
Dembeck, Walter D., Baltimore
Dickman, Hyman, Baltimore
Eichert, Herbert, Woodlawn
Fitzsimmons, Milton J., Baltimore
Glass, Albert J., Baltimore
Greenbaum, Samuel L., Baltimore
Gross, William, Baltimore
Hantman, Irvin, Baltimore
Hoffman, Aaron, Baltimore
Hoffman, Harry, Baltimore
Kairis, John J., Baltimore
Karpa, Isador, Baltimore
Kress, Milton, Baltimore
Krucoff, Maxwell A.,Baltimore
Lebowitz, Harry, Baltimore
Lesser, Abraham D., Baltimore
Levine, Vincent C., Baltimore
Manchey, L. L., Glen Rock, Pa.
Matassa, Vincent L., Baltimore
Michel, George C., Woodlawn
Millard, Ruth, Baltimore
Myers, Ellis B., Baltimore
Pagenhardt, Arthur E., Baltimore
Rosenfeld, David, Baltimore
Rubin, William M., Baltimore
Sachs, Raymond, Baltimore
Satou, Marcus, Baltimore
Saunders, Thomas S., Baltimore
Schiff, Nathan, Baltimore
Schlachman, Milton, Baltimore
Schwartz, David I., Baltimore
Senger, Joseph A., Baltimore
Sheselsky, Samuel J., Baltimore
Silbert, Andrew W., Baltimore
Silverman, Albert M., Baltimore
Silverman, Sylvan B., Baltimore
Snyder, Jerome, Baltimore
Sollod, Aaron C., Baltimore
Springer, Lewis R., Baltimore
Stichman, Solomon, Baltimore
Tarantino, John T., Annapolis
Trattner, James N., York, Pa.

SECOND YEAR CLASS

Abelson, Abraham A., Baltimore
Abelson, Bernard, Baltimore
Ansell, Max S., Baltimore
Baylus, Joseph, Baltimore
Becker, Samuel, Baltimore
Benedetti, Roberto A., Panama
Bernhardt, William R., Baltimore
Block,Michael, Baltimore
Brickman, Hilliard, Baltimore
Carliner, Paul E., Baltimore
Cohen, Harry J., Baltimore
Cohen, Isador M., Baltimore
Cohen, Joseph, Baltimore
Cornblatt, Edmund A., Baltimore

Cwalina, Gustav E., Baltimore
Deal, Justin, Cumberland
Delson, Hyman, Baltimore
Eason, Frederick B., Baltimore
Eisman, Morris J., Baltimore
Fineman, Elliott, Baltimore
Fineman, Jerome, Baltimore
Gaboff, Benj., Baltimore
Gawthrop, Alfred J., Baltimore
Gildea, William, Aberdeen
Ginsburg, Benjamin H., Baltimore
Gluck, Julius, Brooklyn, N. Y.
Goldstein, Albert, Baltimore
Gorban, Thomas, Baltimore
Greenberg, Harry L., Baltimore
Greenberg, Vivian R., Baltimore
Greenfeld, Charles, Baltimore
Greenfeld, Jacob H., Baltimore
Greif, Daniel, Baltimore
Greif, Julius, Baltimore
Grove, Donald C., Baltimore
Gutman, Isaac, Baltimore
Hack, Morris B., Baltimore
Helman, Max M., Baltimore
Highstein, Gustav, Baltimore
Ichniowski, Casimer T., Baltimore
Jacobs, Corinne H., Newport News, Va.
Kaplan, Sigmund S., Baltimore
Kappelman, LeRoy F., Baltimore
Karlinsky, David, Baltimore
Karpa, Maurice, Baltimore
Kaufman, Stanley L., Carroll
Kerpelman, Isaac E., Baltimore
Kramer, Charles, Baltimore
Kroopnick, Frieda R., Baltimore
Kurland, Louis J., Baltimore
Kurtzville, Hymen, Baltimore
Lazarro, Samuel F., Baltimore
Leboff, Sol, Baltimore
Levin, Morris, Baltimore
Levin, Sam B., Baltimore
Levin, Sidney, Baltimore
Levin, Theodore, Baltimore
Levy, Abraham M., Baltimore
Liptz, Alvin, Baltimore
London, Samuel, Baltimore
Luce, Harold D., New York City
Malinoski, Wallace H., Baltimore
McNally, Hugh B., Baltimore
Meeth, George R., Baltimore
Miller, Harry, Baltimore
Miller, Lewis, Baltimore
Miller, Nathaniel A., Baltimore
Morgan, Alfred K., Baltimore
Niznik, Theodore T., Baltimore
O'Connor, Rita F., Cumberland
Pasco, Louis E., Baltimore
Pearrell, Ernest H., Baltimore
Petts, George E., Stemmers Run
Pollekoff, Jacob, Baltimore
Poltilove, Harvey S., Baltimore
Portocarrero, Oscar V., Porto Rico
Provenza, Stephen J., Baltimore
Raffel, Leon, Baltimore
Reichert, Leroy D., Overlea
Richmond, Samuel, Baltimore
Roberts, Bertran, Westernport
Roberts, William P., Baltimore
Rodowskas, Christopher A., Curtis Bay
Rosenberg, Bernard R., Baltimore
Rosenberg, Milton B., Baltimore
Rosenblatt, Sydney, Baltimore
Rubin, Maurice M., Baltimore
Rubin, Samuel, Baltimore
Rudo, Herbert B., Baltimore
Sachs, Abraham, Baltimore
Sager, Ben J., Baltimore
Sapperstein, Jacob, Baltimore
Schapiro, Samuel, Baltimore
Schneider, Gustave M., Bronx, N. Y.
Schochet, George, Baltimore
Schonfeld, Paul, Baltimore
Schwartz, Paul, Baltimore
Sealfon, Irwin, Baltimore
Settler, Myer M., Baltimore
Shivers, Mildred L., Baltimore
Silverman, Paul, Baltimore
Singer, George D., Baltimore
Singer, Isidore E., Baltimore
Slusky, Louis B., Atlantic City, N. J.
Spigelmire, Charles E., Sparrows Point
Stein, Milton R., Baltimore
Stringer, Benj., Baltimore
Theodore, Raymond M., Baltimore
Weisman, Samuel, Pimlico
Wharton, John C., St. Michaels
Yaffe, Samuel S., Baltimore
Zeigler, M. Barclay, Baltimore
Zervitz, Max M., Baltimore

FIRST YEAR CLASS

Abraham, Richard T., Mt. Pleasant, Pa.
Alexander, Latimer B., Concord, N. C.
Allen, John P., Baltimore
Archambault, Paul J., McIntosh, S. D.
Armstrong, Edward A., Baltimore
Baker, William, Baltimore
Barke, Daniel S., Baltimore
Battaglia, Dominick T., Baltimore
Bayley, John S., Baltimore
Beck, Samuel D., Baltimore
Behrens, Joseph J., Baltimore
Benedetti, Eduardo R., Panama
Berman, Frederic T., Baltimore
Bernstein, Edwin E., Baltimore

Bernstein, Nathan, Baltimore
Blanco, Celedonio, Porto Rico
Bloom, Max, Annapolis
Blumberg, Ely, Baltimore
Bresslev, Hyman, Baltimore
Brunnett, William L., Baltimore
Budacz, Julius F., Baltimore
Buppert, Hobart C., Baltimore
Caplan, Bernard S., Baltimore
Caplan, Milton, Baltimore
Carmel, Joseph, Baltimore
Cavacos, Andrew T., Baltimore
Chandler, Nehemiah W., Ocean City
Chupnick, David, Baltimore
Coakley, Arthur E., Havre de Grace
Cohen, Lawrence, Baltimore
Dalinsky, Harry E., Baltimore
Davidson, Nachman, Baltimore
DeDominicis, Amelia, Baltimore
Dembo, Julius L., Baltimore
Diener, Samuel, Baltimore
Downs, Grant, Baltimore
Dyott, William H., Baltimore
Eagle, Philip T., Baltimore
Edelstein, Joseph H., Baltimore
Eichorn, William H., Baltimore
Elson, Norman W., New York City
Feldman, David, Baltimore
Feldman, Leon H., Baltimore
Fink, Melvin J., Baltimore
Fisher, Arthur, Baltimore
Fisher, Joel, Baltimore
Foley, William T., Havre de Grace
Forman, Robert R., Baltimore
Friedman, Howard, Baltimore
Fulton, Charles T., Clarksburg, W. Va.
Futterman, J. C., Baltimore
Geesey, Alton L., Spring Grove, Pa.
Gendason, Morris, Baltimore
Glick, Harry, Brooklyn
Goldberg, Herman, Baltimore
Goldstein, Sam A., Baltimore
Goldstone, Herbert N., Baltimore
Goodman, Daniel, Baltimore
Goodman, Howard, Baltimore
Gordon, Joseph, Baltimore
Gordon, Morris M., Baltimore
Gordy, Lee A., Baltimore
Gresser, Isidor H., Baltimore
Grove, Elmer K., Baltimore
Gum, Wilbur H., White Sulphur, W. Va.
Haberman, Abe, Elkton
Harris, Morris, Baltimore
Helgert, Ernest, Baltimore
Henderson, Edward H., Baltimore
Henderson, Nathaniel P., Baltimore
Hens, Leonard L., Hamilton
Hergenrather, Louis, Towson
Homberg, Henry I., Baltimore
Horne, Peyton N., Baltimore
Howard, Charles T., Pocomoke City
Hunter, Calvin L., Dundalk
Hurwitz, Abraham, Baltimore
Illberg, Peter L., Worcester, Mass.
Itzoe, Leonard V., New Freedom, Pa.
Jaeggin, Richard B., Baltimore
Jaffe, Bernard, Bronx, N. Y.
Janousky, Nathan B., Baltimore
Kallinsky, Edward, Severna Park
Karns, Hugh H., Cumberland
Karwacki, William S., Balimore
Klein, B. Franklin, Baltimore
Klimen, Samuel E., Baltimore
Knop, George W., Baltimore
Kraft, Edwin M., Carrollton
Krakower, Jacob, Baltimore
Kreis, Elizabeth E., Baltimore
Kuhn, Henry, Cumberland
Kushner, Meyer, Baltimore
Lagna, Ernest L., Baltimore
Lambden, Francis A., Baltimore
Landsberg, James W., Baltimore
Lathroum, Tonry R., Baltimore
Lavin, Bernard, Baltimore
Levin, Lester, Baltimore
Levin, Milton, Baltimore
Liberatore, Philip, Baltimore
Liberto, Joseph, Baltimore
Lipner, Samuel, Baltimore
Lyon, Abraham L., Havre de Grace
McGinity, J. Austin, Baltimore
Meyers, Carl J., Baltimore
Milan, Joseph S., Baltimore
Miller, Irving W., Baltimore
Mitchell, Joseph P., Baltimore
Morris, George W., Baltimore
Moss, John H., Baltimore
Muir, William A., Baltimore
Mund, Maxwell H., Baltimore
Narunsky, Reuben, Baltimore
Neumann, Walter P., Overlea
Newman, Leon M., Baltimore
Nusbaum,Clement I., Baltimore
Owens, Randall M., Salisbury
Packett, William H., Warsaw, Va.
Pasovsky, Isadore J., Baltimore
Pfeifer, Charles M., Baltimore
Pinsky, Herman H., Baltimore
Plevinsky, Maurice, Camden, N. J.
Porterfield, William E., Baltimore
Purdum, William A., Baltimore
Rhoderick, William E., Frederick
Riedel, Milton D., Baltimore
Robertson, John E., Baltimore
Rodbell, Theodore E., Baltimore
Rudie, Harry, Baltimore
Rudo, Nathan, Baltimore
Ruth, Stephen W., Baltimore

Sachs, Sylvan, Baltimore
Sacks, Milton S., Baltimore
Sacksman, Edward E., Elizabeth, N. J.
Savage, Milton J., Baltimore
Schapiro, Abraham B., Baltimore
Schwartz, Daniel J., Baltimore
Schwartz, Theodore A., Baltimore
Seidman, Helen B., Baltimore
Seidman, Henry G., Baltimore
Shaughnessy, Grace E., Emmitsburg
Shofer, Thomas, Baltimore
Shure, Arthur A., Baltimore
Siscovick, Milton, Baltimore
Spain, Mary E., Baltimore
Standiford, Isaac W., Fallston
Steinberg, Bernard, Baltimore
Steinberg, Joel, Baltimore
Stiffman, George J., Cumberland
Stimek, Joseph A., Baltimore
Sullivan, Stephen G., Ellicott City
Susel, Benjamin E., Baltimore
Sussman, Sidney, Baltimore
Svarovsky, John W., Baltimore
Szczepkowski, Irene U., Union City, Conn.
Thiermann, Thomas F., Baltimore
Timmons, Norris F., Claiborne
Tralinsky, Julius J., Baltimore
Weiner, Joseph M., Baltimore
Weiner, Leon, Baltimore
Weiner, Martin, Baltimore
Weinstein, Jack J., Baltimore
Wilder, Earle M., Glyndon
Wilson, John J., Brooklyn
Wolfovitz, Sam, Baltimore
Wright, Thomas G., Baltimore
Yellen, Reuben A., Revere, Mass.
Zerofsky, Frank, Baltimore
Zilber, Samuel N., Baltimore
Zoltowski, James J., Baltimore

UNCLASSIFIED STUDENTS

Bayer, Ira E., Baltimore
Brady, Katherine, Baltimore
Cooper, Rogers N., Parkton
Flom, Charles, Baltimore
Harris, Carlton M., Baltimore
Haynes, John M., Baltimore
Hood, Bowman, Baltimore
Kriete, Eduard W., Aberdeen
Lum, Max R., Boonsboro
Ross, Helen C., Baltimore
Schmidt, George M., Baltimore
Simpson, Thomas H., Hollidaysburg, Pa.

THE SUMMER SCHOOL—1927

Aaronson, Martha F., Aberdeen
Aaronson, Virginia J., Aberdeen
Abbott, Kathryn K., Anacostia, D. C.
Albin, William D., Rohrersville
Albrittain, Maria L., LaPlata
Albrittain, Pearl M., LaPlata
Allen, Alfred, Kinsale, Va.
Anderson, Mary, Steubenville, Ohio
Apple, Mary, Cumberland
Armacost, William T., Hampstead
Aud, T. H., Rockville
Baker, Edna M., Crellin
Baker, Mary H., Union Bridge
Baker, William A., Mt. Airy
Baldwin, Kenneth M., Laurel
Banks,. Olive A., Salisbury
Barnes, Erma, New Windsor
Barnes, Rachel D., Charlestown
Barnsley, H. Lucy, Rockville
Bartlett, Edith V., Cumberland
Bates, Byrtle Y., Germantown
Baumgardner, Mary W., Hagerstown
*Beachley, Ralph H., Middletown
Beall, Dorothy I., Chevy Chase
Beall, Elizabeth M., Chevy Chase
Beall, Ruth E., Poolesville
Beall, Susie C., Beltsville
Beard, Edythe, Washington, D. C.
Beaumont, Dorothy, Greensboro
*Beaven, George F., Hillsboro
*Beebe, Evalene B., Chevy Chase
Beggs, Harry W., Westminster
Bell, Mary V., Tuscarora
Bennett, Bertha M., Upper Marlboro
*Bennett, Dill G., Sharptown
Bennett, George E., Mardela Springs
Bennett, W. Osborne, Princess Anne
Bentley, James B., Laurel
Berger, Lola W., Mechanicsville
*Bergeron, Arthur C., Como, N. C.
Biggs, G. Marie, Jessup
Birch, Marian, Mt. Rainier
Bird, Martha, Laurel
Bishop, Charles B., Washington, D. C.
Bishop, Hulda A., Kitzmiller
Bishop, Irva L., Kitzmiller
Bixler, Evelyn T., Washington, D. C.
Blake, Margaret D., Baltimore
Blake, Mary K., Frostburg
Blentlinger, Charles L., Frederick
Bolton, Alice, White Plains
Bonneville, Jennie E., Pocomoke
*Boston, Josiah W., Berlin
Boston, (Mrs.) Nona W., Pocomoke City

Boublitz, Harry D., Baltimore
*Bounds, Roger J., Allen
Bourke, Mary L., Washington, D. C.
Bowers, Helen M., Thurmont
Boyle, Elizabeth G., Frederick
Brackbill, Frank Y., Berwyn
Brady, Eleanor F., Aquasco
Brannock, Kathleen S., Cambridge
Branson, J. M., Mt. Rainier
Brantley, Margaret W., Brandywine
*Bratt, Harry M., Oxford
*Bready, A. C., Rockville
*Brewer, Margaret G., College Park
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Brown, Henry, Washington, D. C.
Brown, Virgil L., Hagerstown
Bruehl, John T., Centreville
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Bundick, Victoria A., Stockton
Burdick, Alice L., Baltimore
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Burrows, Evelyn O., Washington, D. C.
Butler, Minibel, Federalsburg
Butts, Phillys H., Marydel
Cameron, James N., North East
Canter, Grace M., Hughesville
*Carlson, C. Allen, Crisfield
Carney, Winifred C., Frostburg
Carrick, Mary A., Washington, D. C.
Carroll, Mary V., Rockville
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*Carter, John H., Washington, D. C.
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*Castle, Francis M., Brownsville
Caulk, Olive, Sharptown
*Chandlee, Elmer K., Smithsburg
Chandler, Miriam T., Nanjemoy
Charlton, Marion J., Williamsport
Cheezum, Mary L., Preston
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Clark, Stanley A., Washington, D. C.
Clark, (Mrs.) Mary J., Hyattsville
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Cole, Mary A., Centreville
Coleman, Clyde B., Sherwood
Collins, Milton S., Berlin
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Connor, Bertha E., Cumberland
Connor, Nell, Frostburg
*Cooke, Giles B., Gloucester, Va.
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*Cooper, William P., Lonaconing
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*Corbin, Clinton W., Crisfield
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Crow, Kathleen G., Frostburg
Currier, Rodney P., Washington, D. C.
Custer, Paul Y., Grantsville
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Dabson, T. Paul, Greensboro
Dail, Frank C., Greenville, N. C.
Darner, Anna M., Hagerstown
Davis, Frank R., Jarrettsville
Davis, Gertrude J., Shaft
Davis, Susie G., Poolesville
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Day, Katherine S., Washington, D. C.
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*Diehl, William C., Clear Spring
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*Kieson, Estella, Washington, D. C.
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Kroll, Wilhelmina W., Lonaconing
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*Mumma, Richard A., Hagerstown
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*Nock, Alton E., Stockton
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Reck, Myrle C., Mt. Airy
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Shockley, Pearl M., Eden
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Stull, Helen V., Brunswick
Stull, Robert B., Frederick
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*Webster, Ralph R., Deal's Island
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Willison, Nellie S., Cumberland
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*Wright, Arianne V., Easton
Wright, Hannah E., Eckhart Mines
Wyand, William J., Sharpsburg
Wyvill, Ruth C., Upper Marlboro
Wyvill, Ruth M., Washington, D. C.
Yantz, Louise M., National
*Yoder, Roy C., College Park
Yonker, Bernard O., Flintstone
Young, Anna, Boyds
Young, George B., Clearspring
Young, Sallie P., Frederick
Youngblood, Rubie W., Washington, D. C.

*Denotes Graduate Students in Summer School.

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Any further information desired concerning the University of Maryland will be furnished upon application to

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